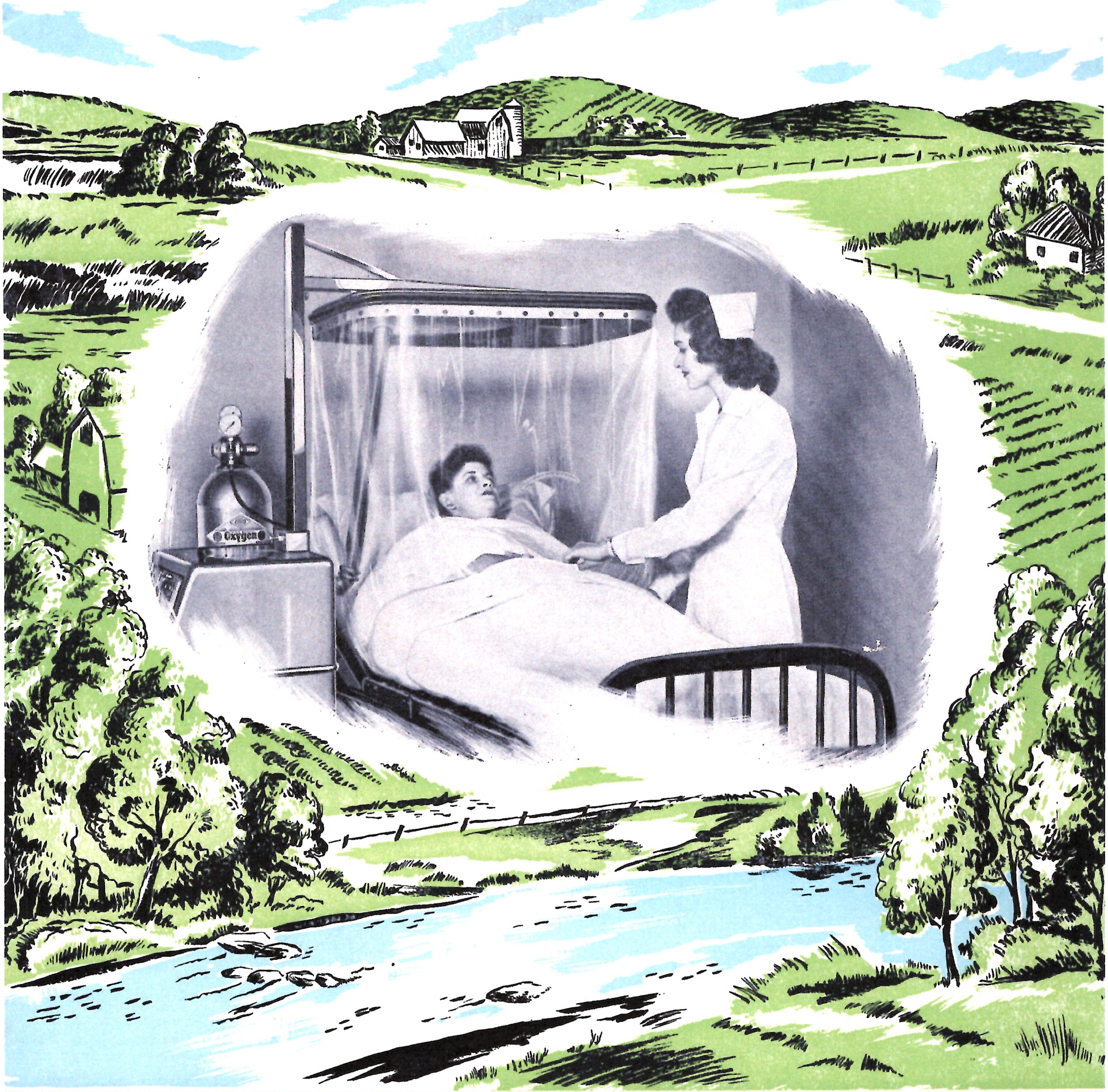
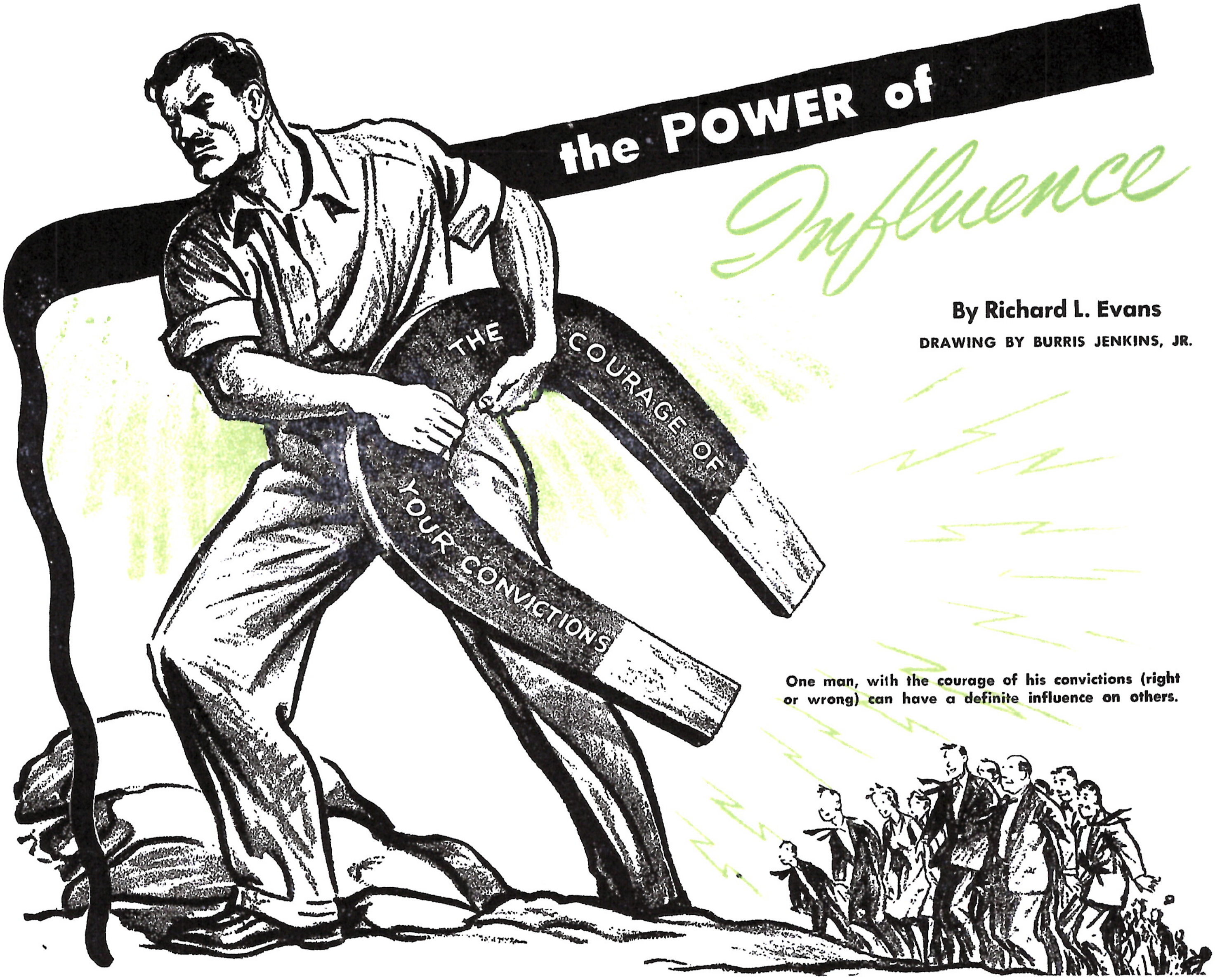


SURGICAL EQUIPMENT

SEPTEMBER, 1947

A bi-monthly chronicle of progressive development

the POWER of Influence


THE COURAGE OF YOUR CONVICTIONS

By Richard L. Evans

DRAWING BY BURRIS JENKINS, JR.

One man, with the courage of his convictions (right or wrong) can have a definite influence on others.

"Example is a dangerous lure: where the wasp got through the gnat is stuck."—Fables of Jean de la Fontaine

"Influence," which plays so large a part in the running of the world, has come in some measure to mean money and manipulation, "pull" and politics, power and propaganda.

And because of emphasis on such meanings, we may have come to suppose that we have little individual influence, because we don't know the "right people" or don't belong to the "prevailing party."

But small as our individual influence may seem to us to be, the power of every person to affect the lives of other people is something to ponder.

No one who has ever seen a boy mimic every movement of his "Dad," or walk in the ways of a big brother, or take up the talk and technique of a workman he is watching, would question the power of personal influence.

Children look and listen. Men observe their fellow men.

And though our only observer were but one small boy, our influence could be endless, because our effect on his life is passed on by his effect on other lives.

Even the least known people have much more influence than they suppose.

What we say and how we say it, what we wear and how we wear it, what we do and how we do it, all have their influence on others.

Those whom we serve and those by whom we are served are all in some degree moved and modified by our manner.

Any question we may ask or any answer we may give has its effect on those of whom we ask or on those to whom we give answer.

Our cheerfulness is contagious. Our sullenness is contagious.

Our honesty sets the pattern for honesty. Cutting corners gives others excuse to cut corners.

Our courtesy invites courtesy.

One gentleman who yields his seat to a lady has exerted some degree of influence upon the inclinations, if not upon the actions, of all who observe.

One man who keeps a calm, cool head may save people in panic.

One man can stop a crowd, and often does. One man can move a crowd, and often has.

One persistent protestor can often prevail against public or private perfidy.

One man with the courage of his convictions often can confound a conspiracy.

Although the world would seem to be run by formal and official bodies, by public policy and power politics, by money and means, by position and preferment — yet the world is made up of people, and people are moved by the personal example of other people.

If we do what we should, others often follow — though we may not know it. If we do what we shouldn't, others find excuse for their misdoing.

If one man breaks through the hedge, or walks across the grass, we may soon expect to find a wide hole through the hedge or a worn path across the grass. But if no one provides the precedent, no one finds a prior path to pursue. Doing something without precedent isn't often easy.

If no man had ever cheated, if no man had ever defaulted, if no man had ever deserted, if no man had ever killed, if no man had ever done a deed of dishonor, it would be all but unthinkable that any man ever would.

But what one does gives excuse to others. Thus precedents are provided, and an endless chain is set in motion.

Never discount the power of your personal influence—neither with your intimate associates nor with the people who make up "the public" — for your life is your own only insofar as it doesn't affect the lives of others. Beyond that, you are accountable for your influence.

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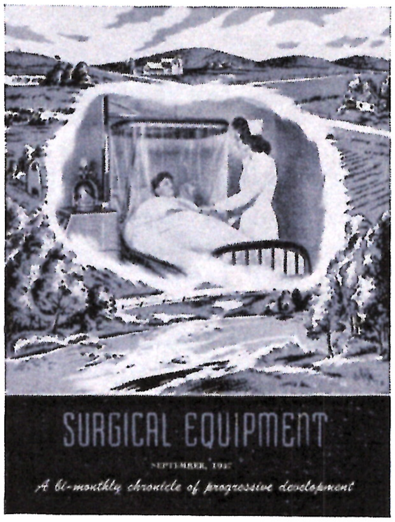
SURGICAL EQUIPMENT

In Its Fourteenth Year of Publication **Vol. XIV No. 4**

On the Cover

Beautiful September; harvest moon time — seventh month of the old Roman year — heralding the approach of fall, with the cold blasts of winter close behind.

In hospital circles, September marks also the beginning of the oxygen therapy season which is why we have chosen the theme depicted on the front cover. This artist's impression attempts to show pictorially, in composite, the use of oxygen in therapy.



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SURGICAL EQUIPMENT, distributed bi-monthly, is sponsored by the following manufacturers whose research, production, sales and service facilities are directed to meeting the specific needs of hospitals and surgeons.

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Airco Export Corporation
New York City

THE OHIO CHEMICAL & MFG. CO.
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In CANADA
Oxygen Company of Canada Ltd.
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A DISCUSSION ABOUT THE SALES AND TECHNICAL STAFF OF *Ohio Chemical*

R. H. McELRATH, Madison
Manager, Heidbrink Technical Sales

by
G. J. DEKKER
Vice President and General Manager

In the July issue of SURGICAL EQUIPMENT, I had the pleasure of telling you a little of the "behind the scenes" story of Ohio Chemical. I hope that you found it of interest. Now, I should like to expand somewhat on that part of Ohio Chemical's story, which has to do with the presentation of our product to you — the part played by our Sales Force and its right arm, the Technical Advisory Staff.

All of my business life has been in the selling end of business. I have thoroughly enjoyed every minute of it. It is easy to get enjoyment and satisfaction from selling, if you can feel that every sale results in benefit to the customer and that you are of service to him. Naturally then, I follow with keen interest the doings of our salesmen, whose work assumes importance greater than the sales activities of other markets or industries. I admire the ability of our men and appreciate the seriousness of their task of presenting products in a field where every sale or purchase, well made, means comfort for the sick, greater efficiency for those ministering to them and sometimes the saving of a life.

There are two fundamental things that we believe our salesmen should do in developing and maintaining good customer relations. The first of these is to prove to our customers that the statements of our representatives can be depended on. The second thing is that they should sell the prospect only if they are convinced that he (the customer) is satisfied that our product presents an advantage. We believe that successful customer relations are built around the word "confidence." *Your* confidence in the word of our sales representative, and *your* confidence in the products he is presenting.

We feel that in many instances our men can help you in selecting the type of product best fitted to your needs. They are available to consult with you regarding purchase requirements concerning which a manufacturer's representative may be in a position to offer suggestions based on his knowledge of the product, and his experience in its application and use by other customers.

Some of our men are outstanding in their record of assistance in helping to plan hospital requirements. We know that the very nature of hospital work demands that every facility for good patient-care be considered. We know also that upon us rests the dual responsibility of guaranteeing a dependable product, and in aiding in the selection of the model and size most suitable for the service for which it is intended. This is why we back up our salesmen and our sales outlets with a department of technical advisors and planners to consult and recommend. We want you to remember that *every man on the sales staff of Ohio Chemical and every "Ohio" dealer has behind him the full support and cooperation of a headquarters corp of specialists, qualified to supply technical information and product selection guidance based on the cumulative experience of years of service to the medical and hospital market.*

The branch locations of Ohio Chemical are in thirty-one key points, a list of which may be noted on the title page of this issue of SURGICAL EQUIPMENT. These

L. L. LUNENSCHLOSS, Madison
Hospital Sales Consultant,
Scanlan-Morris Equipment

C. A. SIMPLER, Chicago
Regional Sales Manager,
Midwestern Region

HUGH D. CAMERON, Toronto
Manager, The Oxygen Company
of Canada, Ltd.

J. H. WILLIAMS San Francisco
Regional Sales Manager,
Pacific Coast Region

H. C. HOOPER, Madison
Assistant Sales Manager

W. A. LUNGER, New York
Asst. Regional Sales Manager,
Eastern Region

branches are grouped for convenience into regions reporting to regional sales offices. The supervisory regional offices and the sales executives in charge are located as follows: Chicago, C. A. Simpler; New York, C. S. Brown and W. A. Lunger; Birmingham, E. P. Lindsay; San Francisco, J. H. Williams. In Canada, our regional sales office is in Toronto and is in charge of Hugh Cameron, Manager of The Oxygen Co. of Canada, Ltd.

"Ohio" qualified dealer outlets, numbering in the hundreds, are also well located in key cities. They are carefully chosen for their ability to handle several or all of our major lines. Most of these dealers have been working with the previous "Heidbrink", "Scanlan-Morris" or "Ohio" Companies for many years.

Our staff of technical consultants is maintained to assist the sales personnel in problems of unusual complexity. In this technical consultant group, are persons long identified in the hospital field, including R. H. McElrath, T. J. Rudesill, L. L. Lunenschloss and Wm. Herzog. These men, with a staff of engineers and technical assistants, form the backbone of our technical advisory service, the function of which can best be explained as presented in our advertising . . .

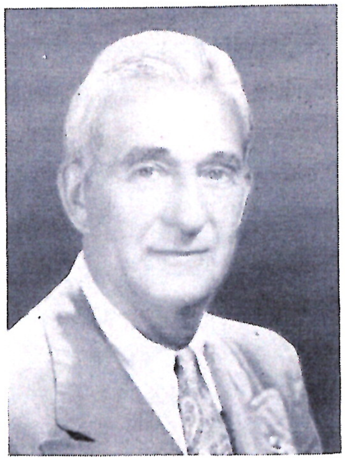
"More than 40 years of experience in designing and manufacturing hospital equipment — including all types of sterilizers, surgical lights, anesthesia apparatus and other major products — and years of contact with hospitals and architects, qualify our Technical Sales Department to supply authentic assistance in hospital equipment planning. Send your problems and floor-plans for recommendations of installations for the greatest efficiency and economy — without obligation."

In other words, the "Ohio" salesman is more than "just a salesman." He is the representative of an organization whose products play an important part in the vital effort of sustaining and maintaining human life. Because our products occupy such a place in your work, we are mindful of the seriousness of our task, and that it carries with it a prerequisite of your confidence in us and in the quality of our products. We hope that we of the general staff in Madison and our sales representatives in the field may continue to earn your confidence.

Sincerely,

Dekker

J. R. FAIRLAMB, New York
Assistant Sales Manager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Special Sales Representative

C. S. BROWN, New York
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E. P. LINDSAY, Birmingham
Regional Sales Manager, Southern Region

T. J. RUDESILL, Madison
Manager, Scanlan-Morris
Technical Sales

WE'LL MEET YOU IN ST. LOUIS, SEPT. 22-25

834 836 838 840

Remember these booth numbers

at

Ohio Chemical
HEIDBRINK
KINETOMETER

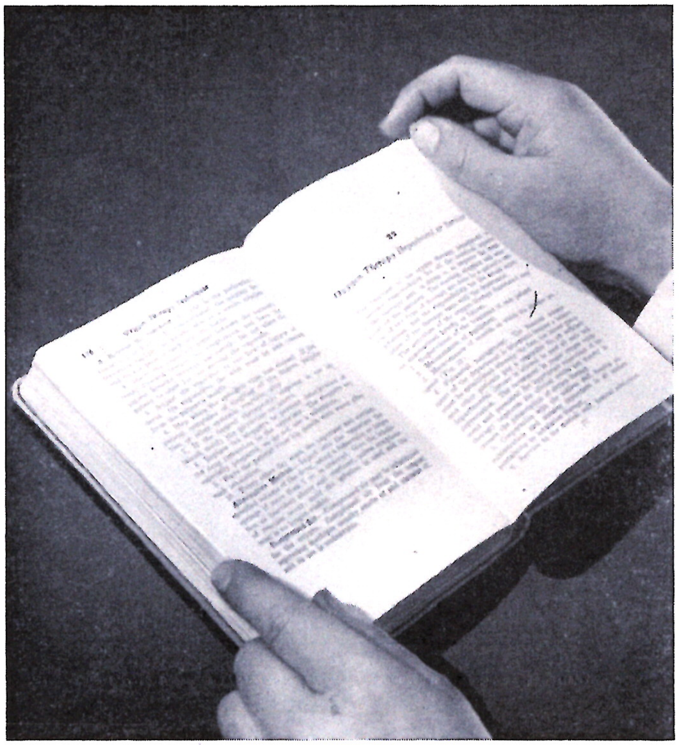
Displays such as this one will tell the Ohio Chemical product story at the St. Louis convention in September.

The 49th Annual Convention American Hospital Association, Municipal Auditorium, 14th & Market Streets, St. Louis.

Of the many excellent conventions that Ohio Chemical attends with an exhibit, we always look forward with great expectancy and anticipation to the American Hospital Association Meeting. Always well attended, this convention, this year in St. Louis bids fair to far outrank its past performance in attendance and interest if present enthusiasm is any guide. Ohio Chemical plans an elaborate representative display of its line of medical and surgical equipment and gases. On hand or in attendance at our booths Nos. 834, 836, 838 and 840 will be:

G. J. Dekker
G. B. Close
T. J. Rudesill
H. C. Hooper
L. L. Lunenschloss
R. H. McElrath
J. Gilroy
R. Davis
C. A. Simpler
L. E. Guentz
E. H. Clark
W. Herzog
T. L. Cunningham

OXYGEN THERAPY HANDBOOK AVAILABLE

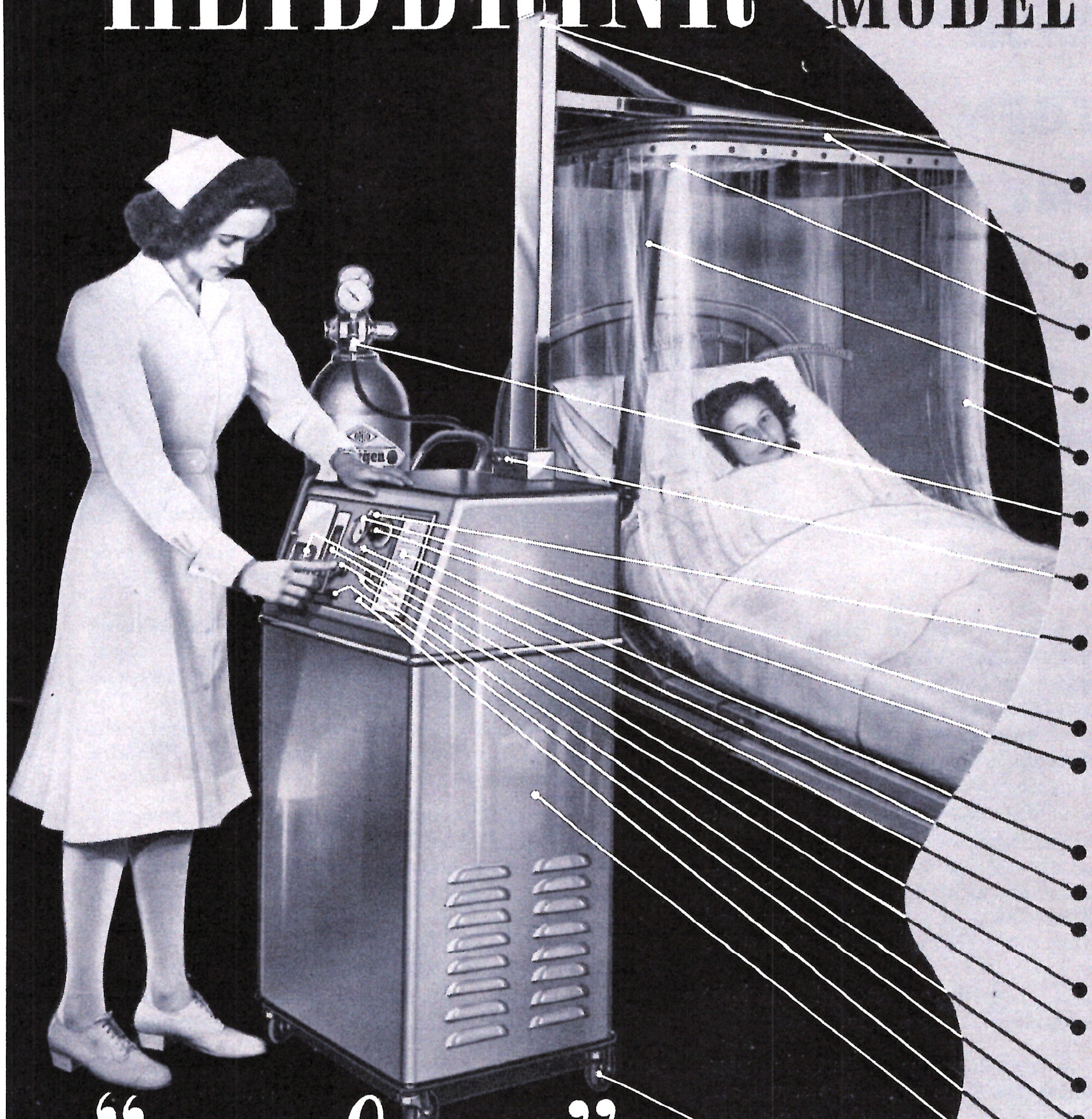


A practical discussion of oxygen therapy techniques is contained in the "Manual of Oxygen Therapy Techniques" by Albert H. Andrews, Jr., M.D., director of the oxygen therapy department and assistant attending otolaryngologist at St. Luke's Hospital, Chicago.

In the first chapters of the book, the author briefly reviews the physiology of respiration and rationale of inhalation therapy, describes the therapeutic gases, cylinders, and regulators that are currently available; and list precautions to be observed in their use. Considerable space is devoted to detailing techniques for oxygen administration by various methods including (1) the oxygen tent, (2) nasal catheter, (3) nasal cannula, (4) masks, face tents and inhalers. Instructions for care and maintenance of the equipment is also covered in this section. A chapter each is given to outlining techniques for carbon dioxide therapy, helium-oxygen therapy, and water vapor therapy.

Copies are available from The Ohio Chemical & Mfg. Co., 1400 E. Washington Ave., Madison 3, Wisconsin, at $1.75 per copy postpaid.

The New HEIDBRINK MODEL 80 E



- Strong, light hood support (folds flat and lowers when not in use)
- Permanent top for hood (with rubber seal)
- Diffuser (eliminates drafts)
- Internal duct (reduces heat load)
- Clear vinylite skirt with zipper openings
- Quick disconnect on oxygen supply hose
- Positive lock on elevating post
- Panel night light also indicates operation of cooling unit
- Dial type thermometer
- Thermostatic temperature control (range to 60° to 90° F.)
- Instruction table
- On-off switch
- Rapid CO_2 detector (illuminated)
- Illuminated flowgauge
- Combination control valve and flush valve
- CO_2 detector control
- Convenience electric outlet
- Sampling tube
- Modernistic, streamlined, sound-insulated steel cabinet
- Heavy duty ball bearing noiseless rubber tired casters

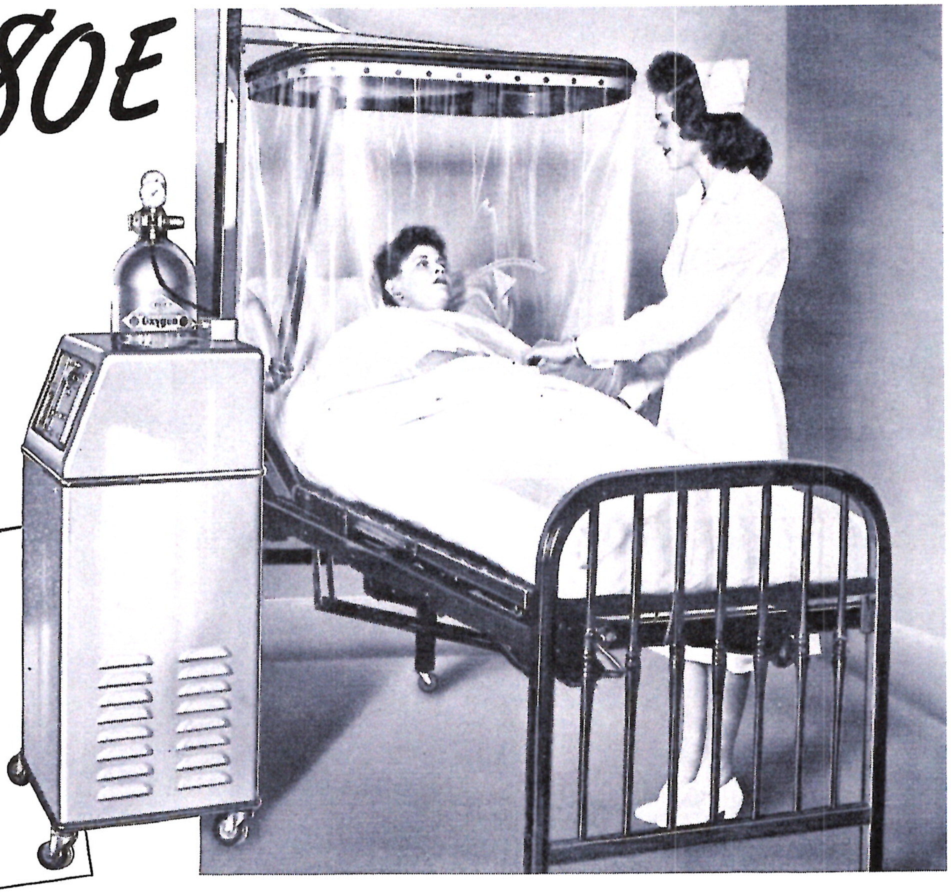
"iceless" OXYGEN TENT

See this tent at the Ohio Chemical booth---AHA convention, St. Louis

New Heidbrink 80E

"ICELESS" OXYGEN TENT

ELECTRIC REFRIGERATING SYSTEM
AUTOMATIC TEMPERATURE CONTROL
DIFFUSED CIRCULATION
TRANSPARENT PLASTIC HOOD
(Oxygen concentrations obtainable: 21 — 60%)*



Heidbrink 80-E "Iceless" Oxygen Tent — clear vision, automatic temperature control and diffused circulation mean comfort for the patient.

All-around clear vision for both the patient and attendants is only one of many advantages of the new Heidbrink 80-E Oxygen Tent with an electric refrigerating system for automatic temperature control. Equipped with a self-illuminated instrument panel and a transparent plastic hood this outfit brings maximum convenience to the therapist and maximum comfort to the patient.

In addition to providing trouble-free automatic circulation of properly "conditioned" air, gently diffused throughout the tent without the creation of drafts, the outfit simplifies the therapist's routine through the use of controls and indicators that are conveniently mounted on a single instrument panel that is self-illuminated for greater visibility.

The outfit is small, ruggedly constructed and light enough to be easily handled by one person.

OXYGEN SUPPLY — A two-stage, non-adjustable, pressure-reducing regulator maintains constant pressure and therefore constant delivery of oxygen, down to almost complete exhaustion of the cylinder's content. A needle valve, mounted on the instrument panel, provides oxygen flow control, and a kinetic flowmeter gives positive measure of the rate of flow. A high pressure rubber tubing from the needle valve attaches to the regulator by means of a quickly detachable connection. Softly illuminated from behind, the flowmeter can be read at night without a flashlight or other illumination.

The needle valve incorporates a means of rapidly flushing oxygen to obtain the desired high concentration within the hood. This flushing is accomplished by merely pushing the knob of the needle valve and holding it until the desired concentration is reached. To adjust the constant flow, the valve knob is turned clockwise or counter-clockwise in the conventional manner. The large flow capacity of the regulator and the combination needle and flush valve make the flushing of the hood a two-minute operation.

ELECTRIC REFRIGERATING SYSTEM — Accurate temperature control is provided by the electric refrigerating system of Model 80-E although operating at constant speed it provides only the necessary cooling capacity at all times. This is accomplished by the automatic control by the thermostat of the flow of the refrigerant. This avoidance of on-off cycling minimizes noise and vibration, keeps power consumption down, and eliminates the mechanical difficulties incident to frequent starting and stopping.

The temperature within the hood is adjustable from 60° to 80° Fahrenheit as desired and is maintained with an accuracy of plus or minus 1°. The temperature is constantly indicated by an accurate remote-indicating thermometer on the instrument panel.

HUMIDITY CONTROL — With the 80-E Tent it is not necessary to remove, empty and replace a water pan. Moisture from the tent atmosphere is automatically disposed of by re-evaporation outside the hood atmosphere. The refrigeration control mechanism is such that the humidity is maintained within comfortable limits.

---

*"Manual of Oxygen Therapy Techniques"
— A. H. Andrews, Jr., M.D.

DIFFUSED CIRCULATION — A most desirable innovation is the draft-free circulation achieved in the hood of the 80-E Tent by a diffuser which distributes the cool incoming tent atmosphere over a large area at low velocities. Circulation is obtained by a compact and efficient electrically-powered blower that provides a constant high rate of exchange in the tent atmosphere, with the flow predominantly in a vertical direction, thus preventing the accumulation of warm, humid air in the top of the hood. The motor is quiet in operation and will provide long, troublefree service.

CARBON DIOXID ABSORPTION — A special feature of the 80-E Tent is an indicator on the instrument panel which shows carbon dioxid concentration in excess of 1%. The therapist merely presses a button for a few seconds and observes the change in color of a solution suspended in a clearly-visible glass tube on the instrument panel. The tube is illuminated from the rear for ease of reading. The carbon dioxid content of the tent may be controlled by inserting or removing the soda lime through which the circulation is directed. A removable mesh basket permits easy cleaning and refilling.

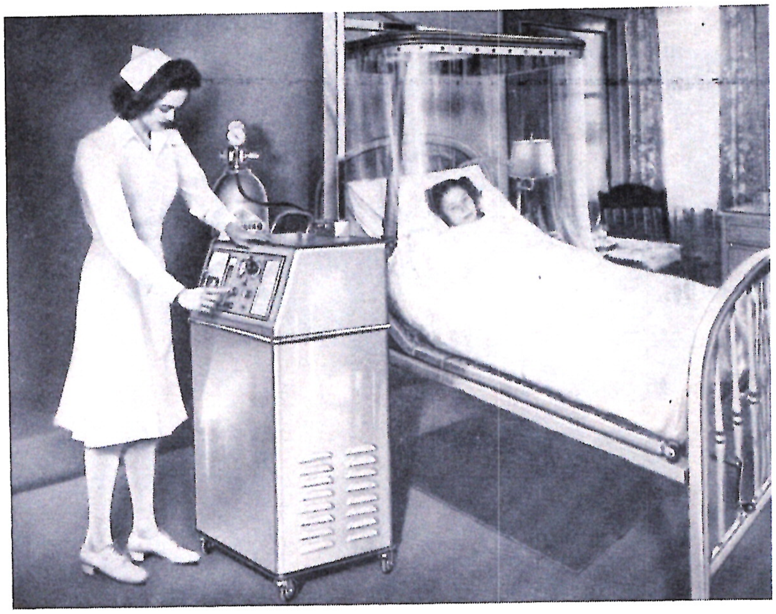
TRANSPARENT HOOD — The hood of the 80-E Oxygen Tent is a skirt of clear, transparent vinylite suspended and sealed against the edge of a rigid aluminum canopy which comprises the top of the enclosure and supports the diffuser. The skirt is easily removable and is tightly sealed by a rubber sealing strip under which it is tucked.

The hood has conveniently-located, zipper-sealed openings for the insertion of food, liquid and clinical thermometers, with minimum oxygen loss and little disturbance to the patient. The hood material is airtight and durable and impervious to most cleansing solutions.

The whole hood assembly may be tilted to a 30° angle for ease of placement over the bed, and may be folded up snugly against the back of the cabinet when not in use.

ADDITIONAL CONVENIENCES —

A roomy compartment in one side of the 80-E cabinet provides space for the convenient storage of parts and accessories, such as the regulator, a wrench, removable rubber goods, and other small articles. A rack is provided on which to wind the electric supply cord and the high-pressure rubber oxygen hose when not in use.



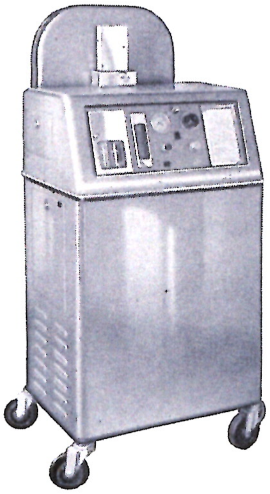
Clear-vision for the nurse — illuminated instrument board and clear view of patient — are advantageous features of the 80-E Tent.

An automatic sampling valve is provided on the instrument panel to which the oxygen analyzer tube can be attached when a sample is to be taken. The sampling valve is automatic in operation, opening only under slight pressure while the sample is actually being obtained, and closing when the pressure is removed. The sample is taken direct from the tent atmosphere.

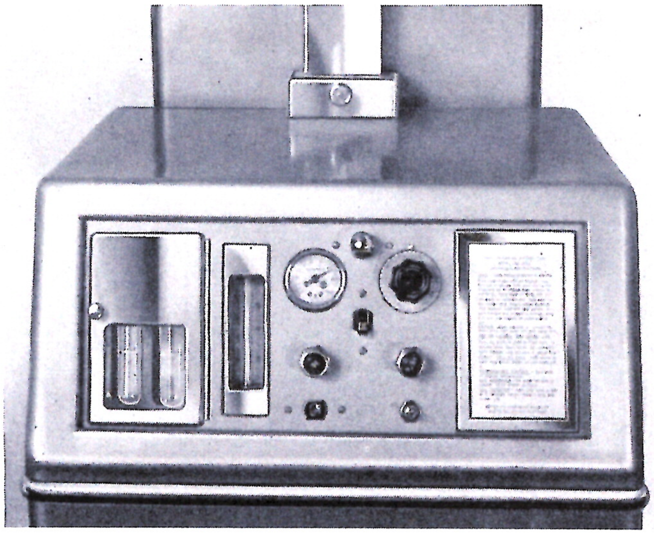
An electric outlet on the instrument panel is a convenience when power is desired for other electrical apparatus, such as vacuum pumps and reading lamps.

Power Supply Switch — The main power supply is controlled by a switch mounted on the instrument panel. The "on" position of the switch is indicated by the lighting of the lamp that illuminates the flowmeter and the carbon dioxid detector. A small pilot light on the instrument panel turns "on" when the refrigerating unit is operating. If the light goes "off" it provides automatic warning that the refrigerating mechanism is not operating. This light also illuminates the rest of the panel so that readings can be made without other sources of illumination.

For more information about Ohio Oxygen Administering Apparatus ask for form 557-B.

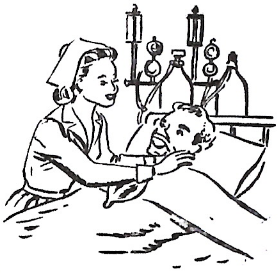


Left: Heidbrink 80-E Tent collapsed for storing.

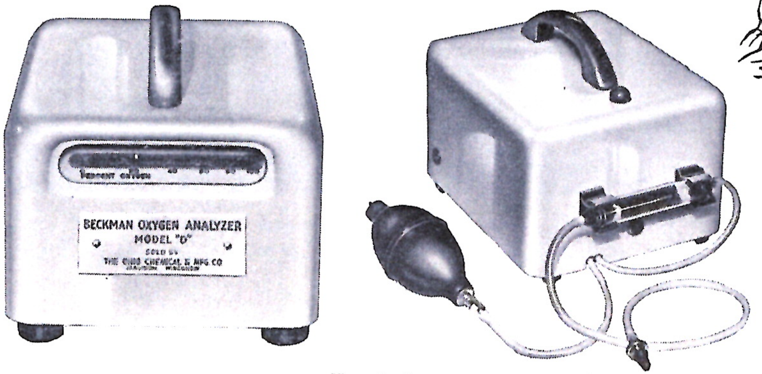


Left: The illuminated instrument panel tells when "all's well" -- needs no additional room illumination at night.

Ohio OXYGEN ADMINISTERING APPARATUS



"... the most important consideration concerning the administration of oxygen is its early employment, utilizing comfortable and effective facilities". Albert R. Behnke, M.D., ANESTHESIOLOGY, pp. 245-260, May, 1941.



Front view *Rear view*
Beckman Oxygen Analyzer

With the ever-increasing use of oxygen therapy for pneumonia, cardiac failure, asthma, pulmonary edema and numerous other ailments — one fundamental rule has persisted; to be most effective, oxygen should be administered early and in adequate concentration and volume.

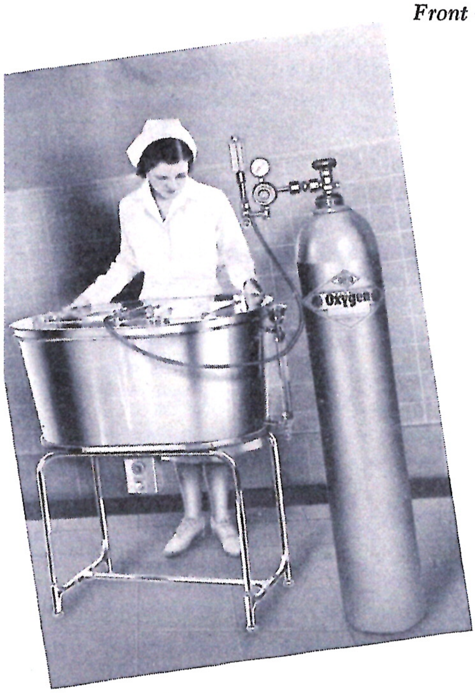
The fall and winter months especially place a heavy tax on oxygen therapy equipment because during this period the number of respiratory ailments spirals upwards.

The Ohio Chemical & Mfg. Co. presents a line of oxygen administering apparatus sufficiently diversified to meet all conditions — effective, comfortable, and quickly available for use.

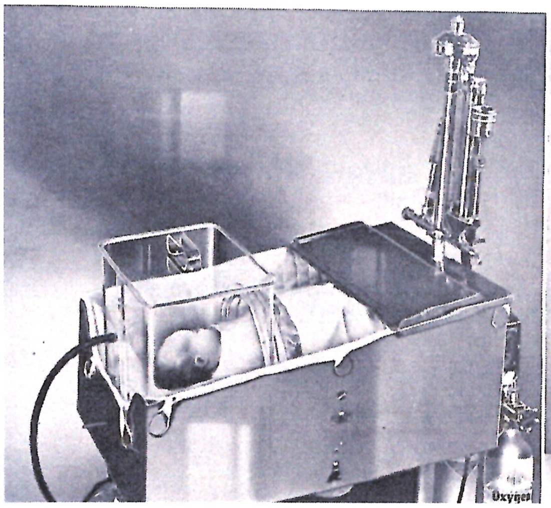
For illustrations of Kreiselman Resuscitators and Bassinets, see page 10 of this issue.

For additional information on the "OHIO" line of oxygen administering apparatus, ask for Form 557.

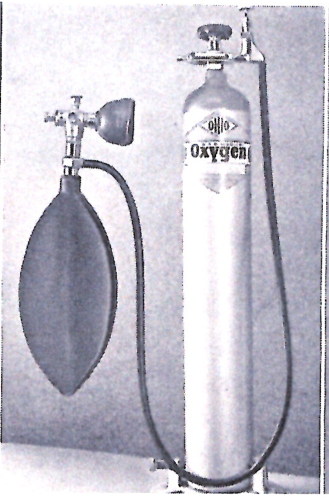
On the opposite page are listed the locations from which "Therapy Rental Service" is obtainable at any hour of the day or night.



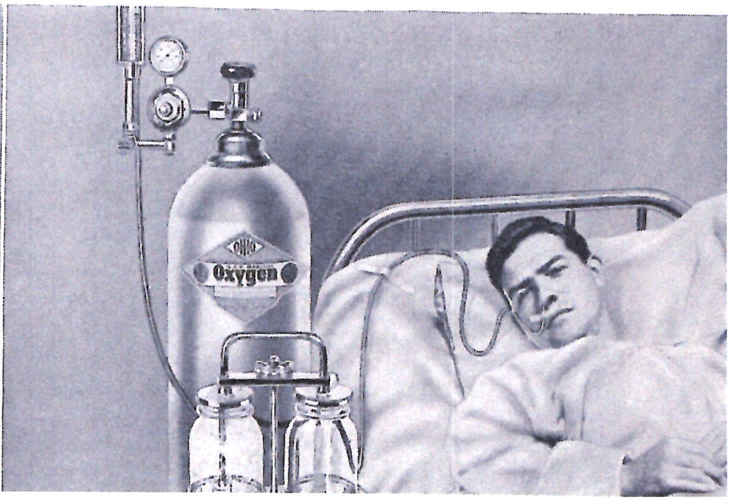
Hess Infant Incubator with Oxygen Therapy Unit



Left: Kreiselman Infant Oxygen Hood



Heidbrink Post-operative Oxygen Unit



Heidbrink No. 12 Oropharyngeal Catheter Outfit

Ohio
OXYGEN THERAPY RENTAL SERVICE

INCUBATORS - OXYGEN
TENTS - CATHETERS -
MASKS - BASSINETS
RESUSCITATORS
ANALYZERS

DAY AND NIGHT SERVICE ON OXYGEN THERAPY

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4848 Long Beach Avenue
Day: ADams 1-9373 Night: VAndyke 1221

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1379 Folsom Street
Day and Night: MArket 1-4226
If calling from East Bay area,
Day and Night: ENterprise 10376

COLORADO — DENVER 5
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Day and Night: TAbor 1707

D. C. — WASHINGTON 2
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Day: LIncoln 9300 Night: REpublic 6100

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Strickland and McDuff Sts.
Day and Night: 7-8431

FLORIDA — MIAMI
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Day: 2-3112 Night: 9-2358

GEORGIA — ATLANTA 2
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Day: LAmar 8091 Night: HEmlock 6300

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221 So. Leavitt St.
Day and Night: SEEley 7732

KENTUCKY — LOUISVILLE 2
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Day: JAckson 5050 Night: WAbash 3027

LOUISIANA — NEW ORLEANS 16
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Supplied by Cambridge, Mass.
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517 West Larned St.
Day: RAndolph 9214 Night: MAdison 6200

MINNESOTA — MINNEAPOLIS
2859—20th Avenue, So.
Day: DUpont 1114 Night: Gladstone 1337

MINNESOTA — ST. PAUL
Supplied by Minneapolis
Day: Midway 5987 Night: GLadstone 1337

MISSOURI — KANSAS CITY 8
517 East 18th Street
Day: VIctor 3443 Night: WEstport 9500

MISSOURI — ST. LOUIS 8
4114 Olive Street
Day: FRanklin 1010 Night: GRand 1160

NEW JERSEY — HOBOKEN
12th & Grand Streets
Day and Night: HOboken 3-3211

NEW YORK — BUFFALO 6
47 Stanton Street
Day: WAshington 6010 Night DElaware 4881

NEW YORK — NEW YORK 10
155 E. 23d St.
Day and Night: Algonquin 4-8220

NEW YORK — ROCHESTER 4
200 St. Paul Street
Day: MAin 820 Night: MOnroe 5300

OHIO — CINCINNATI 3
934 Kenyon Ave.
Day: PArkway 1812 Night: HEmlock 6973

OHIO — CLEVELAND 14
1177 Marquette St., N. E.
Day and Night: HEnderson 4000

OREGON — PORTLAND 9
416 N. W. 10th St.
Day: BE-4626 Night: ATwater 4175

PENNSYLVANIA — PHILADELPHIA 4
3623—25 Brandywine St.
Day and Night: BAring 2-1100

PENNSYLVANIA — PITTSBURGH 29
1116 Ridge Ave., N. S.
Day and Night: FAirfax 7150

TENNESSEE — MEMPHIS 3
237 E. Court Ave.
Day: 8-7150 Night: 2-2138

TEXAS — DALLAS 1
2904 Live Oak Street
Day: Taylor 9141 Night: JUstin 8-6125

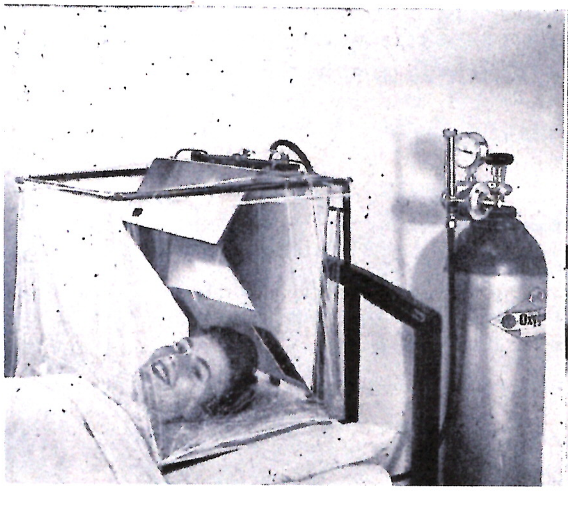
TEXAS — HOUSTON 6
2323 Milam Street
Day: K-3-1232 Night: P-2201

WASHINGTON — SEATTLE 1
1115 Pine St.
Day: SEneca 5366 Night: MAin 6901

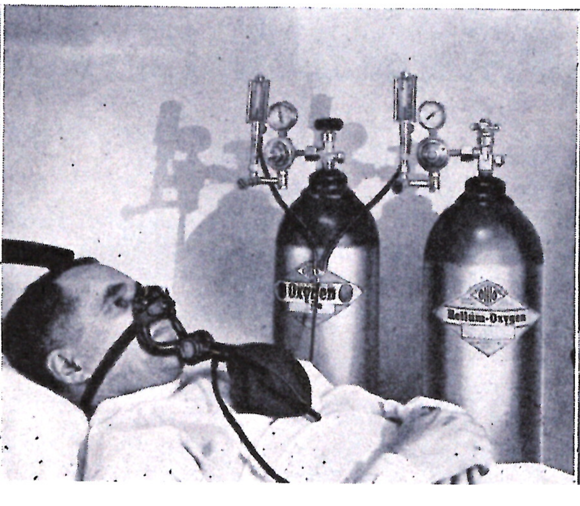
IN CANADA, OXYGEN COMPANY OF CANADA LTD.

ONTARIO — TORONTO 2
180 Duke Street
Day: ELgin 2471 Night:HArgrave 3207
MOhawk 0593

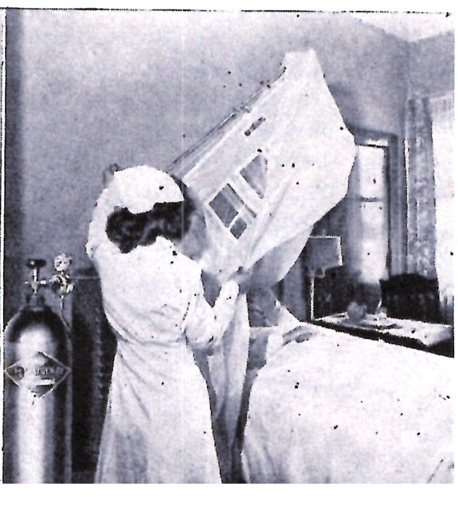
QUEBEC — MONTREAL
2535 St. James St., W.
Day: WEllington 2728 Night: HArbour 6234



Oxylator Tent



B-L-B Inhalation Apparatus with Nasal Mask



Model 75-B Oxygen Tent

Kreiselman

RESUSCITATORS

Kreiselman Resuscitators were designed and developed by Joseph Kreiselman, M.D., in cooperation with the Heidbrink engineering staff of Ohio Chemical. The apparatus is the positive pressure type with adjustable limits of pressure to meet all requirements for the successful treatment of asphyxia and oxygen deficiency.

CART AND STAND MODELS FOR ADULTS

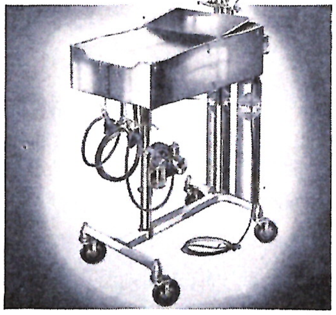
Cart Model 61A, for resuscitation, inhalation, aspiration, includes operative head complete with calibrated automat, flowmeter calibrated for oxygen and 80-20 per cent helium-oxygen mixture; two-stage automatic pressure regulator; electrically-operated aspirator with explosion-proof motor; 3000-pound cylinder pressure gauge; tool box; resuscitation and inhalation masks with adult size interchangeable bodies; adult size catheter adapter; tubings; hand wheel wrench. Mounted on substantial cart having 10-inch ball-bearing rubber-tired side wheels and rear folding bracket with swivel caster.

Stand Model 52A, for small size gas cylinders, is otherwise same as Model 61A except has two-yoke first-stage automatic pressure regulator, second-stage automatic pressure regulator, and is mounted on substantial stand.

MODELS

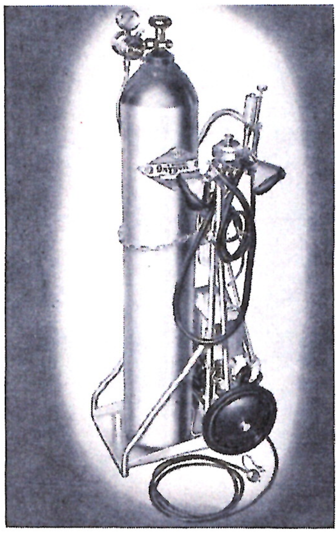
Cart Model 61A (with electric aspirator).
Cart Model 61B (same as 61A except with hand bulb aspirator).
Cart Model 61 (same as 61A except without aspirator).
Stand Model 52A (with electric aspirator).
Stand Model 52B (same as 52A except with hand bulb aspirator).
Stand Model 52 (same as 52A except without aspirator).

BASSINET MODELS

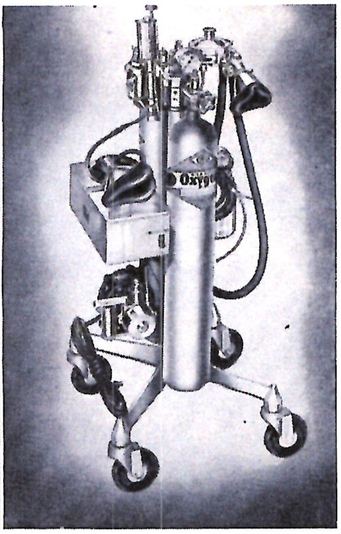


MODEL 21A

Model 21A, for resuscitation, inhalation and aspiration. Includes operative head with automat, manometer and flowmeter; two-yoke first-stage automatic pressure regulator; second - stage automatic pressure regulator; manually adjustable, thermostatically controlled, electrically-warmed bassinet with removable hinged cover and large drawer; perforated platform, adjustable for Trendelenburg position; mattress; electrically-operated aspirator; infant size resuscitation mask with airway; infant size inhalation mask; infant size catheter adapter and intratracheal catheter; tubings; handwheel wrench. Mounted on substantial two-post stand with large ball-bearing swivel casters.



CART MODEL 61A



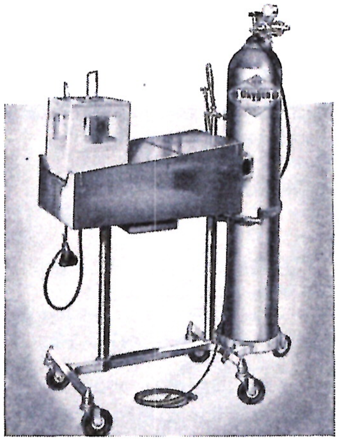
STAND MODEL 52A

Model 21AT, same as 21A, except equipped with trailer for large size oxygen cylinders, platform, binding strap and two-stage automatic regulator.

MODELS

Model 21A (with electric aspirator).
Model 21B (same as 21A except with hand bulb aspirator).
Model 21AT (with electric aspirator and trailer).
Model 21BT (same as 21A except with trailer platform and binding strap for large oxygen cylinder, with two-stage automatic regulator substituted for first and second stage regulators; with hand-bulb aspirator substituted for electric aspirator).

HEATED BASSINET MODELS



MODEL 91T

With the Kreiselman Heated Bassinet Resuscitator, for use on premature babies and other infants requiring oxygen continuously, the humidified oxygen is delivered into the head hood which is suspended over one end of the bassinet and is adjustable.

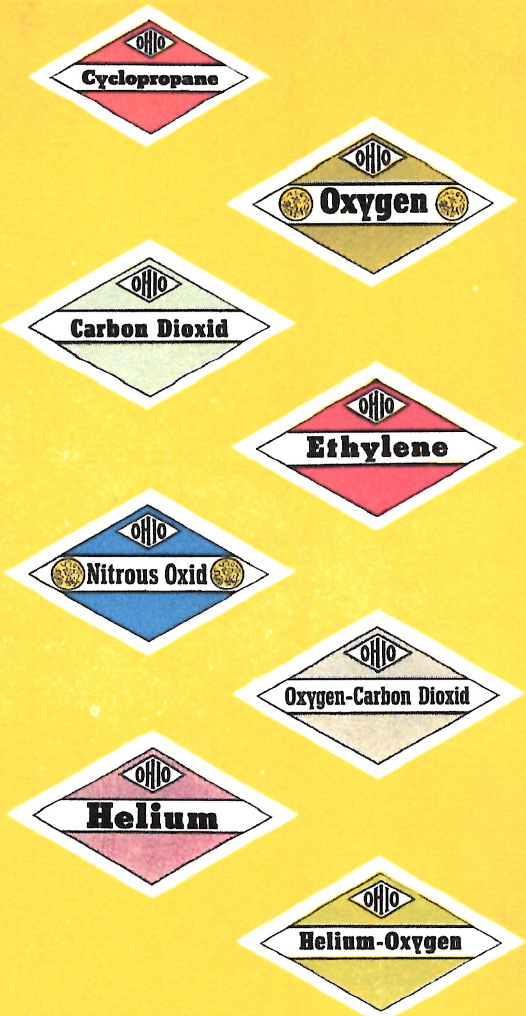
Model 91AT, for use with large oxygen cylinder, is for inhalation and aspiration. The apparatus includes a flowmeter for oxygen; two-stage automatic pressure regulator; manually adjustable, thermostatically controlled electrically warmed bassinet with removable hinged cover, perforated platform adjustable for Trendelenburg position; large drawer and mattress; electrically-operated aspirator with explosion-proof motor; head-tent with thermometer; inhalation mask; tubings, handwheel wrench. Mounted on substantial two-post stand. Trailer platform and binding strap.

MODELS

Model 91AT (with electric aspirator).
Model 91BT (same as 91AT except with hand-bulb aspirator).
Model 91T (same as 91AT except without aspirator).

For more information about Ohio Oxygen Administering Apparatus ask for form 557-B.

HEIDBRINK
SURGICAL ANESTHESIA APPARATUS
"OHIO" MEDICAL GASES
OPERAY SURGICAL LIGHTS
SCANLAN SUTURES



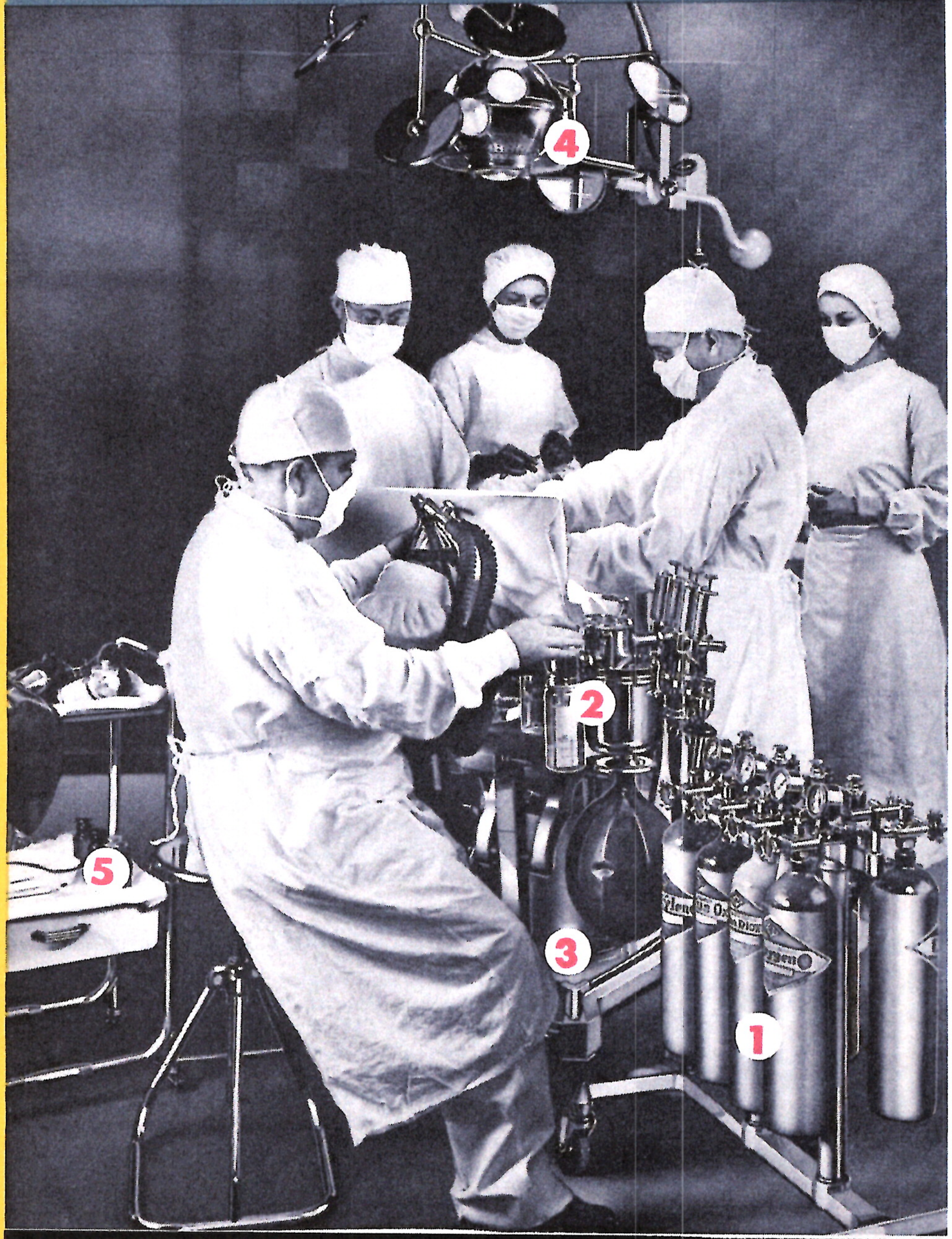
Ohio MEDICAL GASES

Ohio anesthetic and therapeutic gases are backed by exhaustive research that provides highest purity. Exacting methods of manufacture—gained through more than 50 years of specialization—maintain constantly uniform quality.

All Ohio cylinders are thoroughly cleaned on the inside to remove any possible contamination before Ohio gases are compressed into them. Exteriors are refinished each time cylinders are filled.

Valves are checked and serviced prior to each filling and after filling are sealed to guard against the intrusion of dust and grease in the valve orifice and to make possible quick distinction between full and empty cylinders.

Your medical, surgical and anesthetic staffs will appreciate added assurance and peace of mind when they see "Cylinders from Ohio" on your anesthetic and therapeutic equipment. Ohio service in the delivery of these gases is readily available from principal cities.



1. Ohio Anesthetic Gases
2. Heidbrink 4-Gas Kinet-o-meter
3. Scanlan-Morris Operating Table
4. Operay Multibeam Light
5. Scanlan-Morris SterilBrite Furniture

Ohio Chemical

MANUFACTURERS OF MEDICAL APPARATUS, GASES AND SUPPLIES FOR THE PROFESSION, HOSPITALS AND RESEARCH LABORATORIES

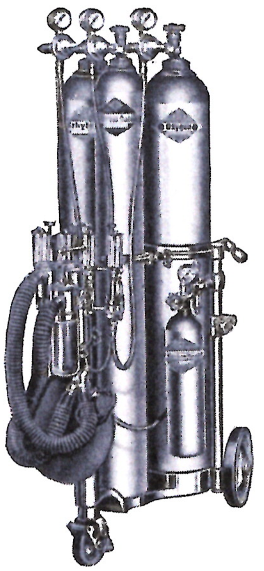
BRANCH OFFICES IN PRINCIPAL CITIES

OHIO

ACCEPTED
COUNCIL ON PHYSICAL MEDICINE
AMERICAN MEDICAL ASSOCIATION

HEIDBRINK APPARATUS *for the efficient*

4- 3- AND 2-GAS KINET-O-METERS



CART KINET-O-METER
NO. 400A

Heidbrink Kinet-o-meters are designed to meet all requirements of the anesthetist for the administration of the various anesthetic gases now generally used. The machines are made in cart and stand outfits, cabinet outfits, and "Midget" outfits. The cart outfits are for the use of large gas cylinders, and the stand outfits for small cylinders.

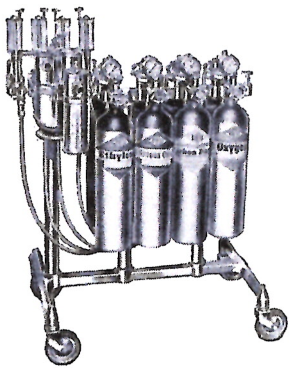
The heads of the machines may be raised or lowered within a range of 20 inches—a great advantage when the operating table is used at extreme angles.

An individual unit controls and delivers each gas. Any gas may be administered singly or in any combination with other gases. Standard sight-feed flowmeters are calibrated for the gases specified—nitrous oxid, ethylene, cyclopropane, helium, carbon dioxid and oxygen. An ether vaporizer is standard equipment.

Automatic regulators accommodate the valves of all standard sizes of American medical gas cylinders. Automatic shut-offs permit replacement of empty cylinders without interrupting anesthesia.

CART KINET-O-METER
NO. 202A

CYCLOPROPANE AND HELIUM ATTACHMENTS



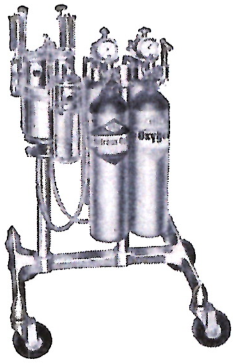
STAND KINET-O-METER
NO. 410A

Since cyclopropane is compressed in cylinders to less than 100 pounds pressure, no regulator is supplied for this gas. On the 4-gas Kinet-o-meters both cyclopropane and helium attachments can be accommodated on the side of the flowmeter head. The 2-gas and 3-gas Kinet-o-meters accommodate either a cyclopropane attachment or a helium attachment, but both cannot be accommodated at the same time.

To avoid error in hook-up, regulators, flowmeters and tubing for each gas are indicated by label and color. These colors conform with the standard colors adopted for medical gases, as shown by the "Ohio" medical gas labels illustrated on the preceding page.

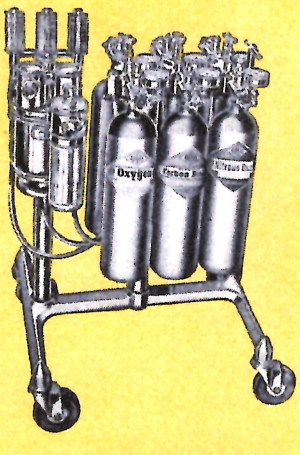
18 MODELS

The 400-series 4-gas Kinet-o-meters are made in three cart models and three stand models of various combinations, the 300-series 3-gas outfits in four cart models and four stand models, and the 200-series 2-gas machines in two models of each style.



STAND KINET-O-METER
NO. 212A

SERIES 800 KINET-O-METERS

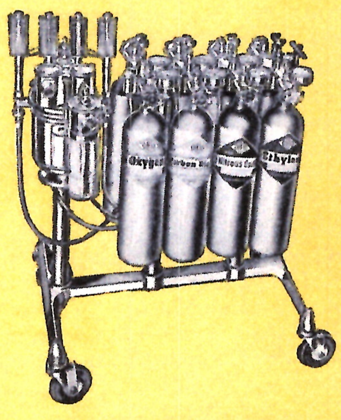


3-GAS STAND KINET-O-METER
NO. 832

Series 800 Kinet-o-meters are for use with small cylinders directly attached to the yokes. Each yoke has a gauge indicating the gas pressure in the attached cylinder. Large cylinders produce equally satisfactory results if connected to yokes with high pressure hollow metal tubings or rubber tubings leading from automatic pressure reducing regulators. Flowmeter head is mounted on telescoping upright, permitting vertical adjustment within a range of 20 inches.

Low volume controls for each gas, with high (emergency) volume controls for oxygen, nitrous oxid and ethylene.

Series 800 Kinet-o-meters are made in six models for various gas combinations: No. 810 4-gas outfit for ethylene, nitrous oxid, carbon dioxid, oxygen, ether; three 3-gas outfits, and two 2-gas outfits. A cyclopropane attachment which bolts to the flowmeter head is available for all models. Helium attachment also available, but both attachments cannot be accommodated at one time except on No. 810.



4-GAS STAND KINET-O-METER
NO. 810

OHIO EQUIPMENT FOR THE *men*

administration of anesthetic gases

CABINET KINET-O-METERS FOR 3, 4 OR 5 GASES

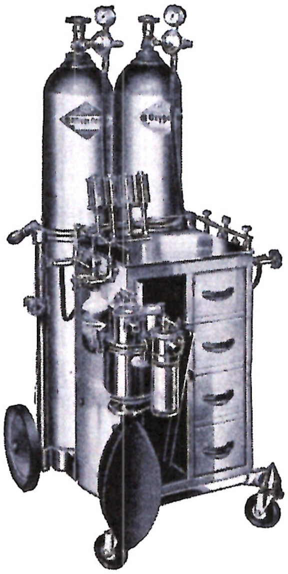
The compactness and easy mobility of Cabinet Kinet-o-meters have made these units favorites in many hospitals. The cabinet provides storage for the machine and a convenient anesthetist's table with four drawers, the complete unit being mounted on four large ball-bearing swivel casters.

The mechanical operation is similar to other Kinet-o-meters. The measured flow of each gas is controlled by a single valve. An adjacent individual emergency flow valve for oxygen, ethylene or nitrous oxid is also provided.

Lateral adjustment clears the cabinet front of all obstruction. The cabinet door disappears within the cabinet. The entire apparatus, except flowmeters and cylinder yokes, folds into the cabinet.

Flowmeters are mounted on top, clearly visible to the operator. Absorber and ether vaporizer with attached tubings and inhaler are readily adjustable in height within a range of 17½ inches—a great advantage when using the operating table at extreme angles from the horizontal.

Cabinets are heavy braced construction, finished in silver-green enamel, with chromium plated trim and cadmium plated base.



4-Gas Cart
Cabinet Kinet-o-meter
No. 900

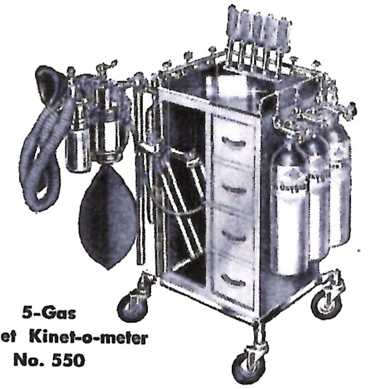
TO-AND-FRO OR CIRCLE-FILTER ABSORBERS AND ETHER VAPORIZERS

Cabinet Kinet-o-meters are available with absorbers of either the To-and-Fro or Circle-Filter type, and ether vaporizers.

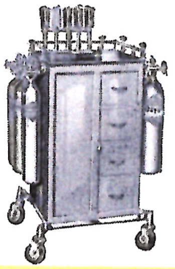
The 5-gas Cabinet Outfit, No. 550, has 1 yoke for cyclopropane, 2 yokes for ethylene, 2 yokes for nitrous oxid, 1 yoke for carbon dioxid, and 2 yokes for oxygen, all in small cylinders.

The 3-gas and 4-gas Cabinet Outfits, series 300 and series 400, each are available in four models of various gas combinations in small cylinders.

The 900-series, 4-gas Cart-Cabinet Outfits, for two large cylinders and yokes for four small cylinders, are made in four models, for various combinations of gases.

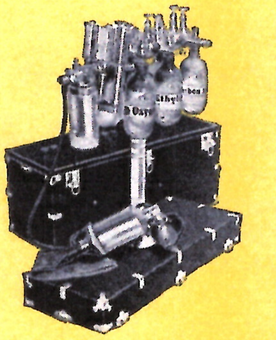


5-Gas
Cabinet Kinet-o-meter
No. 550



—with apparatus folded
into cabinet

HEIDBRINK MIDGET 6-GAS 3-FLOWMETER 6-YOKE ANESTHESIA MACHINE



Midget Kinet-o-meter, No. 5
Carrying Case and sectional
metal upright which attaches
to cover.

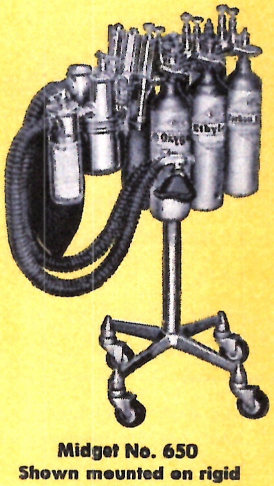
The Heidbrink Midget Kinet-o-meter is small, compact and light-weight, convenient either as portable or permanent equipment.

As a portable, the apparatus is equipped with a handle for carrying and has no stand, although a stand socket permits mounting on any Heidbrink single upright stand. Yokes of the Portable are spaced to accommodate cylinders up to and including size E.

Standard Midgets, designed for administration of six gases and ether, have six yokes and three flowmeters. One flowmeter is triple calibrated for ethylene, cyclopropane and nitrous oxid, with flow of each accurately and independently indicated. Second flowmeter is calibrated for oxygen in liters per minute, and third is calibrated for helium and carbon dioxid. There is also a direct flow valve for emergency volumes of oxygen.

Flow of each gas is controlled independently and delivered under safe low pressure to a common mixing chamber in a manifold whence the gas passes to the inspiration tubing, mixes with the other gases flowing and is breathed by patient before exhalation forces the unused portion into the absorber.

Midgets are made in four models, with either Circle-type or To-and-Fro-type absorber.

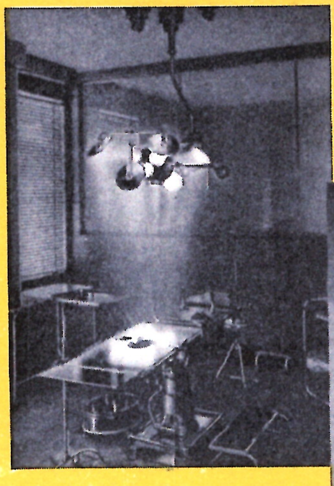


Midget No. 650
Shown mounted on rigid
stand No. 21

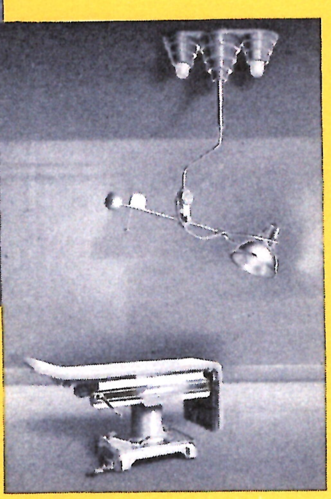
and women in white

CONTINUED ON

SCANLAN-MORRIS
Explosion-Proof Operay Lights



Explosion-Proof Operay Multibeam with auxiliary lights for general illumination.



Explosion-Proof Operay Surg-O-Ray Light adjusted for perineal surgery or obstetrical procedures.

Scanlan-Morris Explosion-Proof Operay Multibeam and Operay Surg-O-Ray lights merit favorable consideration wherever explosion-proof operating rooms are being equipped.

The Multibeam is especially efficient for deep-cavity lighting. This fixture utilizes the basic Operay design which has proved so successful in the field of surgical lighting. The explosion-proof projector head is made of heavy cast aluminum alloy of reinforced ribbed construction, fitted with explosion-proof lenses.

Explosion-proof Operay Surg-O-Ray fixtures are available in both ceiling and portable models.

Both Operay Multibeam and Operay Surg-O-Ray lights are available either with or without auxiliary ceiling lights for general room illumination.

For complete catalog of Scanlan-Morris Operay Lights, mail the coupon below.

SCANLAN SUTURES *for every surgical need...*

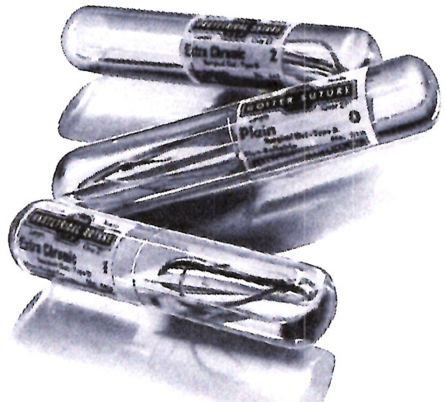
As a result of many years of manufacturing surgical sutures of the highest quality, Scanlan Sutures have earned world-wide acceptance by the medical profession.

Scanlan Sutures are prepared under strict technical supervision and aseptic conditions. Repeated tests are conducted at every stage of production to insure adherence to the high standards adopted for tensile strength, flexibility, and uniform absorptive qualities.

Scanlan suture materials are available with fine-quality surgical needles designed for specific purposes of surgery, including needles of the swage-on type.

Included among Scanlan suture materials are plain surgical gut . . . mild, medium and extra chromic gut . . . silkworm gut, silk, Mayo linen, nylon, Pagenstecher linen, cotton, horsehair and kangaroo tendon.

For illustrated schedule of Scanlan sutures, mail the coupon below.



The "Ohio" line includes many of the major items of Complete Hospital Equipment

In addition to the items briefly mentioned on these four pages, products manufactured by Ohio Chemical include:

SCANLAN-MORRIS STERILIZERS
for every hospital requirement.

STERILBRITE SURGICAL FURNITURE
for operating and delivery rooms.

KREISELMAN RESUSCITATORS

NURSERY DEPARTMENT EQUIPMENT

OPERATING TABLES
and Examination and Treatment Tables.

RECESSED CABINETS
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HEIDBRINK OXYGEN THERAPY APPARATUS

NURSES' STATION UNITS

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1400 East Washington Ave., Madison 3, Wisconsin

Send information on ☐ Anesthesia Apparatus; ☐ "Ohio" Medical Gases; ☐ Surgical Lights; ☐ Scanlan Sutures.

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THE OHIO CHEMICAL & MFG. CO.
1400 East Washington Ave., Madison 3, Wisconsin

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BRANCH OFFICES IN PRINCIPAL CITIES

Emergencies Arising During Anaesthesia*

By F. A. Walton, M. D.
Assistant Anaesthetist, Winnipeg General Hospital

In the days when chloroform was widely used, serious emergencies such as ventricular fibrillation and cardiac standstill were a fairly common occurrence. Emergencies in the operating room where a qualified anaesthetist is in charge rarely end in fatality today. The patient who does die is usually found to have some very adequate cause of death, such as pulmonary embolism or massive haemorrhage. "Emergencies" in a broader sense are quite common, however, and are usually dealt with by the anaesthetist without the rest of the operating room personnel being aware that they exist.

Let us first consider prevention. The proper preparation of the patient can do so much to prevent emergencies arising. Every patient undergoing major surgery should be fully investigated, of course, and blood grouping and matching done, if indicated. It is very desirable that the anaesthetist see the patient beforehand, also. Proper premedication, especially adequate doses of atropine at least one hour before the operation, is important for the limitation of secretions and for the depression of vagal reflexes. If the premedication, including morphine, cannot be given by hypodermic, due to lack of time, then it can safely be given intravenously in the usual doses so long as at least one minute is taken in the administration.

I must also mention the great importance of adequate fluid replacement preoperatively. The indications for rushing an injured patient into an operating room are practically confined to severe sudden haemorrhage. It was found during the war that seriously wounded patients taken to the operating room without much fluid therapy often died. Later in the war patients were given adequate periods of resuscitation; this varied from one to ten hours and included glucose solution, normal saline, blood and plasma intravenously — sometimes in large quantities.

Operating Room Equipment

Adequate equipment can, of course, help to prevent emergencies arising, and is essential in their treatment. There should be a *modern gas machine, laryngoscope and endotracheal tubes* at least, and these should be immediately at hand and in working order before starting even a minor anaesthetic. Today the anaesthetist is often left without adequate assistance. For all major surgery there should be at least two unscrubbed nurses in the operating room, one of whom is available to help the anaesthetist with the induction, intubation and intravenous therapy, et cetera. I was amused recently to see a colleague holding the intravenous tubing in his teeth; he explained that that was his third hand.

Respiratory Complications

Respiratory arrest is the commonest and was at one time the most alarming event that occurred in the operating room. It is even commoner now since the introduction of curare. There are several causes, such as breath holding in light anaesthesia, an obstructed airway, deep anaesthesia, or carbon dioxide depletion which occurs over vigorous artificial respiration or with the hyperpnoea of a crying child during induction. It may also occur following the administration of oxygen after a period of anoxia (due to the stopping of the anoxic carotid body chemoreceptor emergency reflex).

Not so many years ago cessation of respiration was the signal for dramatic, often traumatic, and largely ineffectual artificial respiration, combined with the administration of stimulants and probably the forceful dilation of the anus. To the modern anaesthetist, with a gas machine, respiratory arrest *per se* causes no anxiety whatever, and the rest of the operating room personnel are often unaware that the patient has stopped breathing. I have yet to see a patient who could not be adequately and safely oxygenated by intermittent pressure on the rebreathing bag. (This is now called controlled respiration.) One must, of course, have an adequate airway and the ability to keep an airtight, or almost airtight, fit of the mask on the patient's face. It is seldom necessary to insert an endotracheal tube, although an oral airway may be needed. I have never seen distention of the stomach occur during this manoeuvre, although it apparently does occur occasionally. If a gas machine is not available, one may blow directly into a face mask or use direct mouth to mouth insufflation. If an endotracheal tube is in place, one can blow directly into it. A useful and fairly efficient method of artificial respiration is by rib traction. This is done by passing one's finger under the costal margins at about the nipple line and pulling out and compressing the lower ribs alternately. All these methods should be used at about the normal respiratory rate and should be co-ordinated with the patient's own efforts when they occur. An expensive machine is not

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* Reprinted from The Canadian Hospital, July, 1947

absolutely essential; an oxygen tank with a reducing valve leading to a rubber rebreathing bag and face mask does nicely. The bag can be emptied once a minute to get rid of carbon dioxide.

Laryngospasm is another not uncommon cause for alarm. Its contributing factors are excess fluid in the pharynx which irritates the larynx, such as blood, vomitus, or the excess secretion of heavy smokers or under-atropinized patients; too rapid an induction with an irritating vapor such as ether; injudicious and early insertion of an oral airway or endotracheal tube and surgical stimulation of the too lightly anaesthetized patient. A combination of these causes is often present. The condition is first manifested by stridor which may go on to complete expiratory spasm with ever increasing cyanosis. The resultant anoxia increases the laryngospasm which in turn increases the anoxia and therefore the spasm. Treatment is first directed at removing the irritating factor in the throat with suction and possibly utilizing the low head position or turning the patient on his side to allow the secretions easy drainage out of the mouth. Surgical stimulation should be stopped immediately, also. Atropine gr. 1/100 should be given intravenously and curare 2-3 c.c.'s, if available; 100 per cent oxygen should be forced into the patient's lungs and if this is not possible, (and often it is not), then the mask delivering oxygen should be kept on the patient's face so that the patient's first breath will be oxygen. Laryngospasm is usually self-limiting but if the patient's condition becomes alarming one should attempt to insert a semi-rigid endotracheal tube past the closed cords. If this is not practical or possible, a tracheotomy should be done without delay.

Another pulmonary complication is flooding of the bronchial tree with pus or blood. This may occur due to the bursting of a lung abscess or during the needling of a lung. Patients in whom these accidents might occur should always have an oral tracheal tube inserted early during the anaesthetic. At the first sign of fluid in the lungs, the table should be placed in the steep Trendelenburg position and the bronchial tree aspirated with a urethral catheter. If there has been delay in recognizing the accident then bronchoscopy will probably be urgently needed.

Cardio-vascular Emergencies

A fall in blood pressure is a very common untoward event under anaesthesia. The pulse is unreliable in judging the blood pressure, and all patients under anaesthesia of any duration should have their blood pressure checked frequently. It is convenient to have one of the patient's arms out on an arm-board both for the administration of intravenous fluids and drugs and for checking the blood pressure. One must attempt to diagnose the cause of the low pressure before instituting treatment.

Deep ether anaesthesia will often lower the blood pressure, sometimes quite markedly, and should be avoided when possible. The diagnosis is easily made here and confirmed by the rise in pressure as the anaesthesia is lightened. *An overdose of pentothal* also causes a drop in pressure. The types of cases where this is most likely to occur are: old age, hypertension, toxaemia and shock. Patients who are toxic or in shock take very much less pentothal than they would normally. Even as little as 1 c.c. of two and one-half per cent pentothal in a shocked patient can cause apnoea and a severe drop in pressure. This category of patients also takes much less of any anaesthetic, of course. *Anoxia* will produce a drop in pressure which is usually preceded by a rise of short duration. *Low blood volume* is probably the commonest cause of drop in blood pressure. All major operations should have an intravenous running of dextrose or saline, so that plasma or blood can be administered quickly when indicated. As far as possible blood loss should be replaced with a small margin in the patient's favor. The treatment of shock includes lowering the head of the table and the administration of oxygen. Stimulants have very little place but neosynephrine m.i or m.ii given intravenously may be necessary in the acute stage. This will restore the blood pressure temporarily pending the administration of blood or plasma.

Other causes of a drop in blood pressure include vagal reflexes, pulmonary embolus, coronary occlusion, and carotid sinus stimulation during operations on the neck.

Vomiting

Vomiting is of course a very serious complication during anaesthesia. If a patient has had solid food recently, the important time factor is that between the meal and the accident. Following an accident the stomach empties very slowly and food takes many more hours than usual to pass on into the small bowel. If the patient is thought to have excess fluid in the stomach or upper bowel, such as with intestinal obstruction, then the draining of the stomach with an indwelling suction tube of the Levine type pre-operatively, left in place hanging over the edge of the operating table, greatly lessens hazard to the patient. The usual teaching when giving an anaesthetic to a patient with food in the stomach has been to keep the head low to prevent aspiration if the patient vomits. If the anaesthetic is deep, and it often is to prevent vomiting, then gastric contents can and do well up into the pharynx past the relaxed cardiac and crico-pharyngeal sphincters. For this reason it is preferable to elevate the head of the table about eight degrees and induce with a non-nauseating anaesthetic such as intravenous pentothal. I then give cyclopropane and make certain that the patient is kept well under so that he can't vomit. The anaesthetic is kept at this level until the operation is completed and the last dressing is in place. The patient is then turned on his side, the head of the table lowered fifteen degrees and the patient observed until he is conscious. If a patient should vomit under anaesthesia and the extent of the operation permits, the patient is quickly turned on his side, the head of the table is lowered and the pharynx aspirated and/or cleaned out with a finger covered with gauze. If the operation has not been started the patient is then allowed to rouse completely before recommencing the anaesthetic. If the operation is expected to take a long time or if the patient is to be on his face or in the Trendelenburg position, it would be best to insert an orotracheal tube under deep anaesthesia.

Treatment in Pre-mortem Stage

Some of the foregoing emergencies may, of course, go on to the pre-mortem stage which is recognized by the complete absence of any pulse or heart beat. If the abdomen is open this can be determined easily by palpating the aorta. Otherwise the best method in an emergency is to have someone continually palpating the femoral artery as it crosses the pubic ramus; pulsation can be felt here when it is apparently absent elsewhere. When the cardio-vascular system has completely failed it is usual to inject m.x. of epinephrine into the heart. The best site is the right auricle, which is reached by passing a five-inch needle through the third intercostal space immediately to the right of the sternum. The needle is directed downwards and towards the mid-line to a depth of three and one-half to four and one-half inches in adults and about two inches in children. One should be able to aspirate blood before injecting. The needle prick alone is often sufficient to initiate contractions. One should not use adrenaline if cyclopropane of chloroform is the anaesthetic; neosynephrine m.v. could be tried in these cases. If cardiac puncture fails to elicit a response, massage of the heart must be done without delay. During this time the lungs should be inflated rhythmically with oxygen. Six to eight minutes of complete cerebral anoxia will lead to irreversible changes in the cortical cells.

Methods of resuscitation of the clinically-dead person such as intra-arterial transfusion, intracardiac transfusion, and the use of an artificial pacemaker, are still not generally applicable although they hold great promise.

Finally, I would like to mention the use of intracardiac and intravenous procaine. If cardiac irregularity is part of the picture of collapse inject 5 to 7 cc. of 1% procaine intravenously or into the heart if the chest is open.

One accident I would stress is that of *having the wrong cylinder on the gas machine, so that one is giving, say, nitrous oxide when one intends to give oxygen.* The patient will be breathing well and the cardio-vascular system will be all right at first, but there will be increasing cyanosis. When a mysterious cyanosis like this occurs it is well to change machines immediately or to let the patient breathe air which has adequate oxygen. A similar mysterious increasing cyanosis occurs when the gross flow valve of nitrous oxide is turned on inadvertently. I have seen this happen three times. Fortunately, the cause was twigged without too much delay.

All unconscious patients should be kept on their side or in the semi-prone position; the jaw and tongue then fall forward, thus giving a good airway. If the patient should vomit he is unlikely, in this position, to aspirate any of it. Any patient who has undergone major surgery should have his blood pressure checked frequently during the first twelve hours at least. *Nasal oxygen should be administered* at a rate of 6-8 litres per minute to any patient who is very restless or cyanosed.

Suspense —Max Thorek, M.D.

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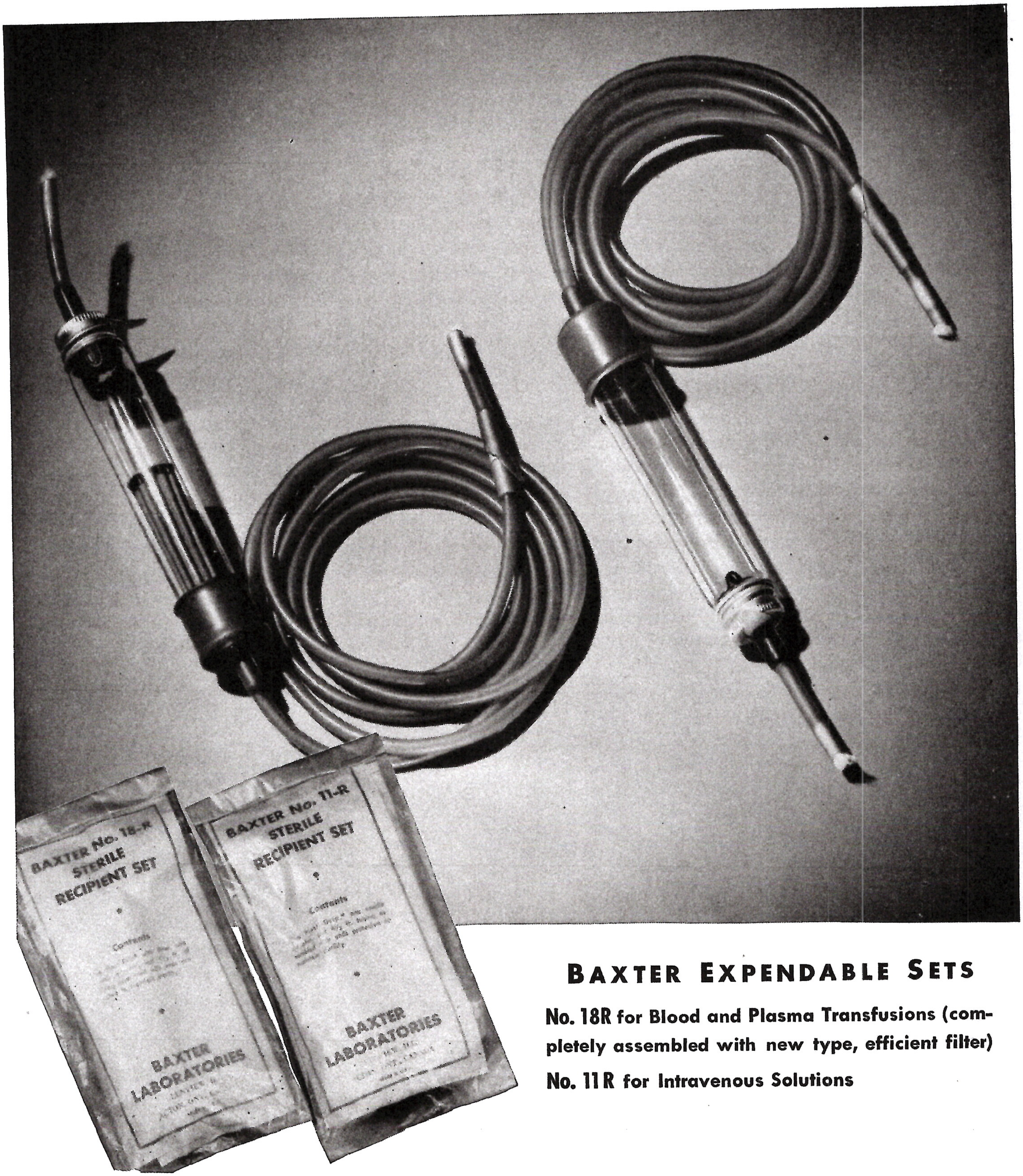
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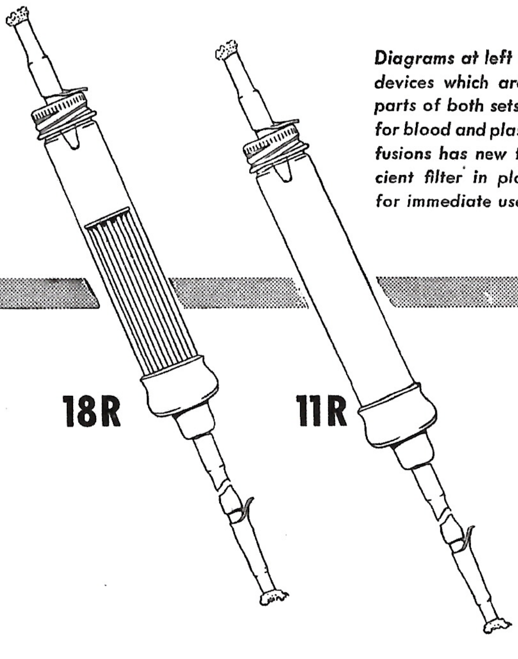

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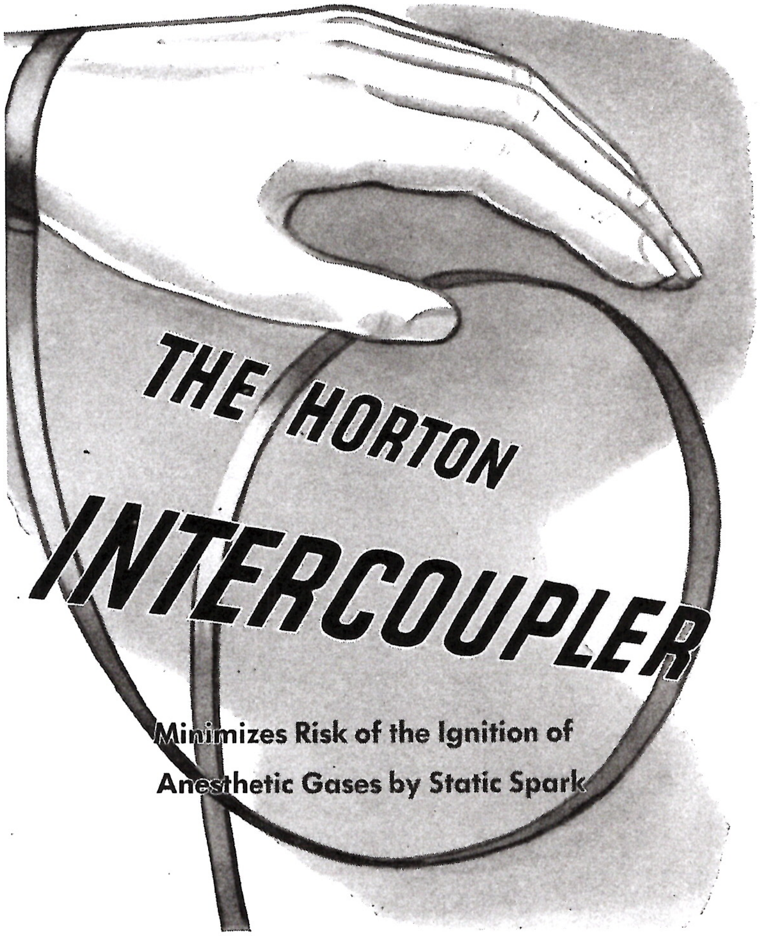


THE HORTON INTERCOUPLER

Minimizes Risk of the Ignition of Anesthetic Gases by Static Spark

The Horton Intercoupler is a device designed to reduce the hazard of igniting explosive anesthetic gases. The sole function of the Intercoupler is to equalize electrostatic potentials among such bodies as may be directly connected to it.

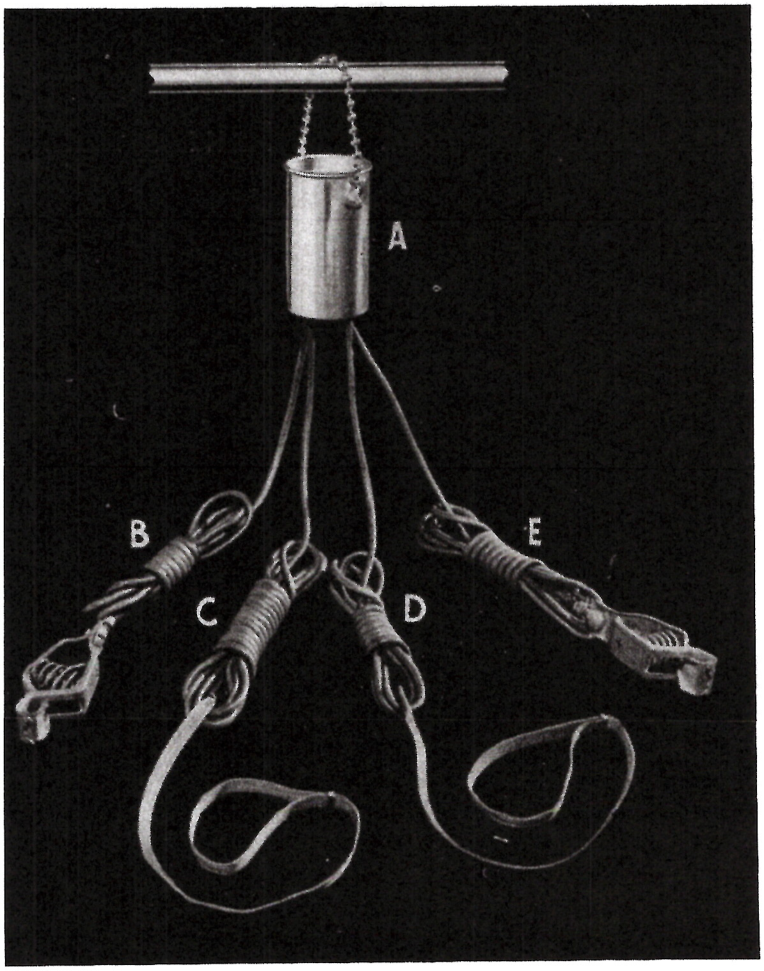
The Horton Intercoupler consists of a small metal case containing a network of resistors so arranged as to present five terminals, between any two of which there is a resistance of one megohm. Any two to five bodies connected to the terminals are maintained at the same electrostatic potential. (A sixth terminal can be provided if requested.)

The use of high resistance coupling eliminates certain risks which are involved in direct coupling by means of wires or chains. Any currents from the lighting circuit which might accidentally pass through intercoupling connections are limited to magnitudes which are not hazardous. The intercoupled bodies are also prevented from acting as a single electrostatic condenser of high capacitance. This is desirable in order not to increase the energy in any sparks which may be received from unintercoupled bodies.

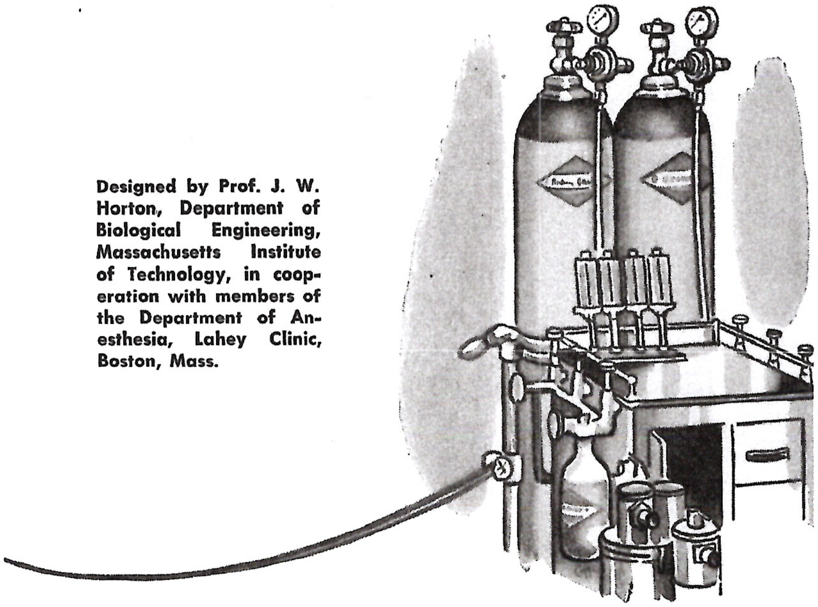
Precautions Necessary

Although the Horton Intercoupler provides a plus safety factor, the usual precautions should not be disregarded. High humidity should be maintained. The bag and breathing tubes should be wetted before starting anesthesia. The breathing bag should *not* be disconnected during the operation nor until the mask has been removed from the patient's face. Silk and woolen outer garments should be prohibited. The anesthetist's stool should have no cushion. Woolen blankets and gas machine covers should not be used. The usual precautions against flames, sparks, cauteries and similar hazards should be maintained.

For more complete information on the use of the Horton Intercoupler, ask for Form No. 1-140.



Designed by Prof. J. W. Horton, Department of Biological Engineering, Massachusetts Institute of Technology, in cooperation with members of the Department of Anesthesia, Lahey Clinic, Boston, Mass.



THE OHIO HYGROMETER

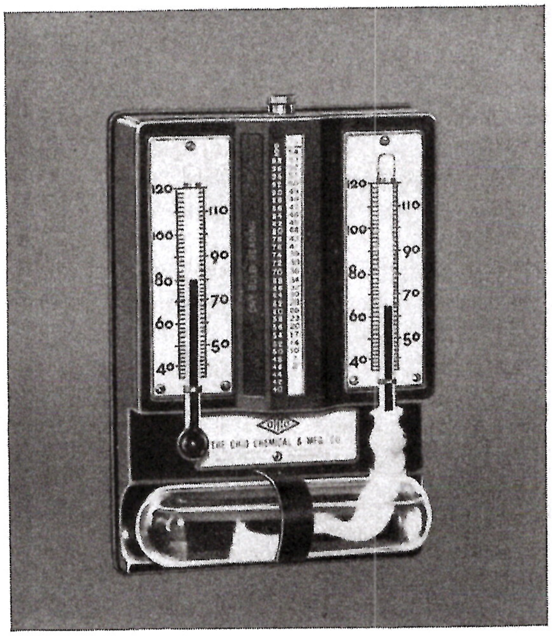
For testing humidity in operating rooms and oxygen tents

A compact unit for quickly and easily determining the percentage of relative humidity. Thermometers are accurate to a high degree, and the concealed roll bearing the percentage tables eliminates the necessity of referring to separate charts or tables. The Ohio Hygrometer is completely self-contained.

DIRECTIONS

Observe the difference between the dry and wet thermometers. Turn the roll until this difference is indicated in the red figure at the top. The percentage of relative humidity will then appear opposite the dry bulb reading. Example: dry bulb reading, 80; wet bulb reading, 65; difference, 15. With the roll turned until 15 appears in red at the top, the figure on the roll opposite 80 is the percentage of relative humidity, which in this case is 44.

Renew wick frequently. Accurate results are not possible when wick is clogged with dirt or salts deposited from the water.



THE OHIO OXYLYZER

For analyzing the oxygen content of an oxygen tent

The OHIO oxylyzer provides a quick easy way to check the oxygen concentration surrounding the patient in the oxygen tent. The apparatus consists of a glass jar containing oxygen reagent, a pipette fitted with copper solution that fits inside of the jar and the stem of which connects to outlet of syringe supported in holding bracket. A side tube fitted with rubber tubing extension is connected to the oxylyzer jar.

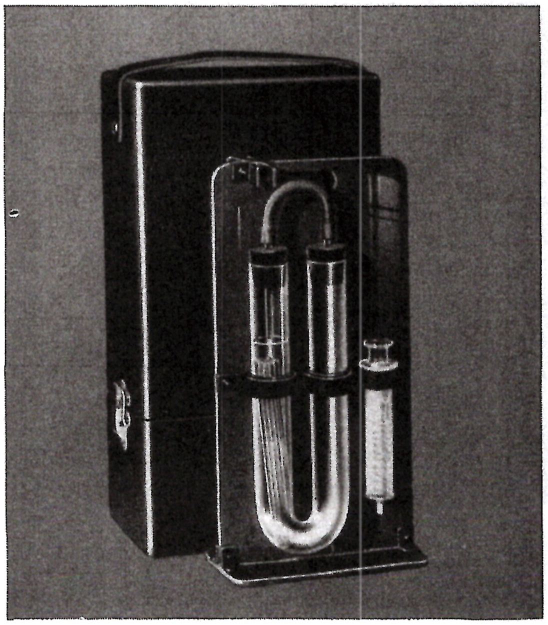
To analyze the oxygen content of a tent, the sample is taken at the tent outlet or from near the patient's face by momentarily opening the tent. The syringe is disconnected from the pipette, the plunger withdrawn until the end of plunger is beyond the zero mark and then pushed in until its end is exactly at the zero mark. The syringe outlet is reconnected to the pipette stem and the plunger slowly depressed all the way. After 30 seconds or so, the plunger is withdrawn until the liquid in the pipette stem is at proper reading level. The bottom of the plunger then indicates the percentage of oxygen concentration.

THE OHIO ANALYZER

A compact, easy to use Analyzer for routine analysis of the tent air

The apparatus consists of two U tubes mounted on opposite sides of a supporting board or rack. The U tube on one side is for the analysis of the Carbon Dioxid content, and the U tube on the other side is for analysis of the Oxygen content. A removable glass syringe is mounted on one side of the board.

One of the U tubes has glass tubing; the other contains a roll of copper screen. The latter is used for the analysis of Oxygen content and is to be filled with a mixture of equal parts of sixty per cent (60%) ammonium chloride solution and concentrated ammonium hydroxide. The U tube with glass tubing is to be filled with a ten per cent (10%) potassium hydroxide solution. Care should be taken that both U tubes are filled exactly to the level mark provided. (The chemicals above mentioned are furnished as part of the equipment.)



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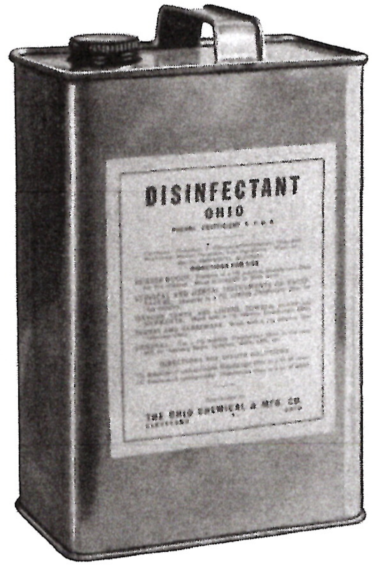
Disinfectant Ohio is an economical, powerful germicidal agent possessing a number of exceptional qualities that are especially valued in hospitals, dental offices, laboratories, and other institutions where aseptic conditions are essential.

An especially valuable quality of Disinfectant Ohio is its property of disinfecting rubber goods at room temperature. When used as directed, it is not detrimental to rubber. However, all rubber parts should be thoroughly rinsed in plain water after immersion in any disinfecting solution.



In addition to being non-injurious to rubber, Disinfectant Ohio, when used as directed, is non-inflammable, non-poisonous and non-injurious to the skin.

Disinfectant Ohio is an effective germicidal agent not only for the disinfection of rubber goods and parts, but also for disinfecting surgical and dental instruments, dishes, glassware, linens and towels, and as a disinfectant for general cleaning, including the scrubbing of walls and floors.

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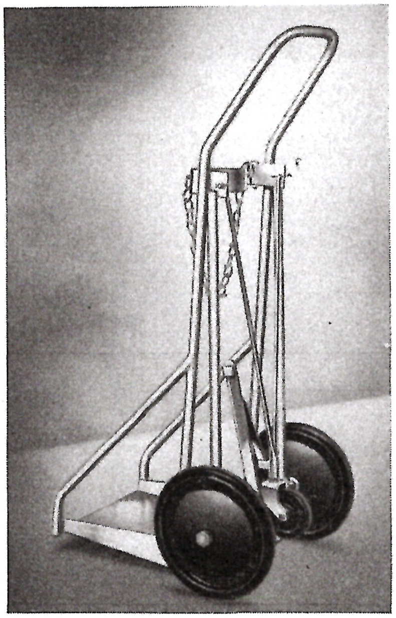

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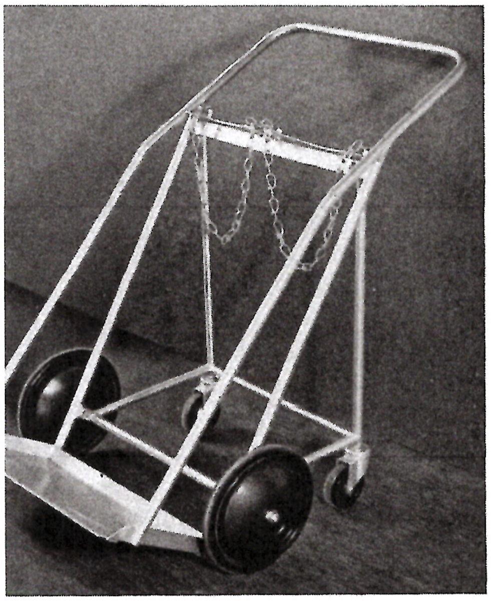
The No. 4 cylinder truck provides a safe and easy method of transporting large oxygen cylinders in the hospital. It is designed to provide a sturdy base for the cylinder when in the upright position. The truck is equipped with 10-in. ball-bearing wheels with rubber tires, a rear wheel to support the cylinder when tipped back for wheeling, and a binding chain.

The No. 4 cylinder truck also provides a desirable means of transporting a large oxygen cylinder and the No. 12 Oropharyngeal Catheter Outfit.



MODEL A 2-CYLINDER TRUCK

Conveniently accommodates 2 large cylinders for transportation — Provides sturdy base for the cylinders in upright position — Equipped with 10-inch ball bearing wheels and 2 rear wheels on rigid non-collapsible support. Binding chain arrangement same as on No. 4 truck. The Model A 2-cylinder truck is ideally suited for use with the Model M oxygen and helium-oxygen inhalation apparatus outfit.

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